Gulf Research Reports

Volume 1, Number 6

Ocean Springs, Mississippi, U.S.A.

April, 1964

Gulf Research Reports

Volume 1 | Issue 6

January 1964

A Bibliography of Anomalies of Fishes

C.E. Dawson
Gulf Coast Research Laboratory

DOI: 10.18785/grr.0106.01
Follow this and additional works at: http://aquila.usm.edu/gcr

 Part of the Marine Biology Commons

Recommended Citation
Dawson, C. 1964. A Bibliography of Anomalies of Fishes. Gulf Research Reports 1 (6): 308-399.
Retrieved from http://aquila.usm.edu/gcr/vol1/iss6/1

This Article is brought to you for free and open access by The Aquila Digital Community. It has been accepted for inclusion in Gulf and Caribbean Research by an authorized administrator of The Aquila Digital Community. For more information, please contact Joshua.Cromwell@usm.edu.

Gulf Research Reports

Volume 1, Number 6

Ocean Springs, Mississippi, U.S.A.

April, 1964

A BIBLIOGRAPHY OF ANOMALIES OF FISHES

By

C. E. Dawson

GULF COAST RESEARCH LABORATORY

Ocean Springs, Mississippi

Table of Contents

Introduction

This bibliography was originally intended as an adjunct to the author's current studies of anomalies in marine fish populations. A number of recent notes have shown, however, that present workers are largely unfamiliar with the rather extensive literature on fish teratology in respect to both particular anomalies and their previous recognition in a species or other taxon. There is an evident need for a compilation of the literature and it is hoped that the present work will fulfill its purpose by facilitating current and future studies in this important area of ichthyology.

Standard bibliographical and abstracting sources such as Dean's "Bibliography of Fishes," "Zoological Record," "Biological Abstracts" and the "Current Bibliography for Aquatic Sciences and Fisheries" have all been searched for applicable citations. Further entries have been obtained from Gemmill's "Teratology of Fishes" and other references available to the writer. It is unfortunate that the included references have not all been read and abstracted but this was beyond the scope of available time and finances.

In general, the bibliography is restricted to naturally occurring anomalies and literature on the experimental production of abnormalities has been omitted. The few exceptions, particularly in the areas of wounds and regeneration, are included because of their obvious application to survival studies on free-living fishes. All citations are given equal status in that no attempt has been made to indicate relative importance of individual contributions. It is doubtful whether any bibliography may be considered complete but it is felt that literature dealing directly with abnormalities has been fairly well covered. The major omissions may be expected in papers of Russian, Baltic and Scandinavian origin as well as in references to teratological material included in studies of a more general nature, and not listed in the titles. In this respect, it is requested that errors of ommission and commission be brought to the writer's attention. Authors of pertinent subject material are requested to forward reprints so that a continuing file on anomalous fishes may be maintained at this Laboratory.

Abbreviations and complete titles of literature sources have largely been compiled from the "World List of Scientific Periodicals" and the "World List of Periodicals for Aquatic Sciences and Fisheries." The full title or place of publication have not been obtained for a few journals and these are identified only by the information available to the writer.

Acknowledgement is made to Saburo Nishimura, Japan Sea Regional Fisheries Research Laboratory, Niigata, Japan, for his valuable assistance in providing information on Japanese titles and sources.

Bibliography

1. Aboim, A. N. 1938. Quelques anomalies morphologiques et de coloration chez une Sole (*Solea senegalensis* Kaup). Bull. Soc.portug.Sci.nat. 13(2):3-6, 2 pls.
2. _____ 1939. Quelques anomalies morphologiques et pigmentaires chez des Soléidés (*Solea vulgaris* Quens. et *S. senegalensis* Kaup). Bull.Soc.portug.Sci.nat. 13(10):47-51, 2 pls.
3. Aitken, W. W. 1937. Albinism in *Ictalurus punctatus.* Copeia 1937(1):64.
4. Albrecht, P. 1886. Ueber eine in zwei Zipfel auslaufende rechtsseitige Vorderflosse bei einem Exemplare von *Protopterus annectens* Owen. S.B.dtsch.Akad.Wiss. 32:545-546, pl.
5. Aldrovandi, U. 1642. Monstrorum historia, cum parapipomenis omnium animalium. Bartholomaeus Ambrosinus labore et studio volumen composuit. Bologna.
6. Alexander, G. 1943. A major anomaly in the hepatic portal system of *Squalus acanthias.* Copeia 1943(3):188-189, fig.
7. Allen, E. R. and Neill, W. T. 1953. A xanthic largemouth bass (*Micropterus*) from Florida. Copeia 1953(2):116-117.
8. Allin, A. E. 1945. Another albino lake trout. Copeia 1945(1):55.
9. Allis, E. P. 1899. An abnormal musculus obliquus superior in *Carcharias.* Anat.Anz. 16:605-607, fig.
10. Amemiya, I. 1917. Ueber das Teleskopauge des Goldfisches. J. Coll.Agric., Tokyo 6:245-259, pl.
11. Amlacher, E. 1961. Taschenbuch der Fishkrankheiten. Gustav Fischer, Jena, ix + 286 pp., ill.
12. Anisits, J. D. 1912. Eine seltene Missbildung bei einem Rochen. S.B.Ges.naturf.Fr.Berl. 1912(4):223-245, 7 fig., 3 pls.
13. Annandale, N. 1907. Melanic specimens of the Puntia (*Barbus ticto*). Rec.Indian Mus. 1:81.
14. Anon. 1901. Biological notes from U. S. Fish Commission Laboratory, Woods Hole, Mass. Bull.U.S.Fish.Comm. 1899:305-306.
15. Anutschin, A. W. 1924. Über eine Mutation des Brachsen (*Abramis brama* L.). Russk.gidrobiol.Zh. 3:71-72, 2 figs.
16. Apstein, C. 1894. Junge Schollen (*Pleuronectes platessa* L.) kommen nicht in der Ostsee vor? Dtsch.Fisch.-Ver., Mitth. Sect.Küst.Hochsee Fisch. 5:103-107.
17. _____ 1895. Junge Butt (Schollen, *Pleuronectes platessa*) in der Ostsee. Wiss.Meeresuntersuch. 8:1-25, 10 figs.
18. Archey, G. 1924. An abnormally colored specimen of the yellow-belly (*Rhombosolea millari* Waite). N.Z.J.Sci.Tech. 6:342.
19. Arnold, J. P. 1911. Hautwucherungen bei Fischen. Wschr. Aquar.-u. Terrarienk. 8:322.

20. _____ 1912. Ueber Melanismus bei den lebendgebärenden Zahnkarpfen. Wschr.Aquar.-u.Terrarienk. 9:377-379, 2 figs.

21. A(rnoult), J. 1954. Tête monstrueuse de Carpe. Nat.malgache 6:132, fig.

22. Arthur, D. R. 1950. Abnormalities in the sexual apparatus of the dogfish (*Scyliorhinus caniculus*). Proc.Linn.Soc.Lond. 162: 52-56, 3 figs.

23. Arudpragasam, K. D. 1960. On the anatomy of a two headed shark. Ceylon J.Sci.(B) 3(2):167-172, 4 pls.

24. Atz, J. W. 1953. Fishes come in white, too. Anim.Kingd. 56(2): 51-55, 4 figs.

25. Audeville, A. d' 1888. Un cas singulier de tératologie sur un salmonide monstreux. Bull.Soc.Acclim.,Biarritz 5:990-993.

26. Ayres, W. O. 1849. (The skull of a *Labrax* showing a curious malformation). Proc.Boston Soc.nat.Hist. 3:121.

27. Bacescu, M. and Nicolau, C. 1955. Un turbot (*Scophthalmus maeoticus* Pallas) avec les yeaux symétriques et le corps ambicolore, pêche dans les eaux Roumaines de la Mer Noire. Bul.Inst.Cerc.pisc. 14(3):41-46.

28. Baer von, K. E. 1845. Ueber doppelleibige Missgeburten oder organische Verdoppelungen in Wirbeltieren. Mem.Acad. Sci.St-Pétersb. 4:79-178.

29. _____ 1862. Ein Wort über einem blinden Fisch als Bildungs-Hemmung. Bull.Acad.Sci.,St-Pétersb. 4:215-220.

30. Bagenal, T. B. 1961. The long rough dabs of the Clyde Sea area. J.Mar.biol.Ass.U.K. 41:49-57.

31. Bailey, R. M. and Gosline, W. A. 1955. Variation and systematic significance of vertebral counts in the American fishes of the family Percidae. Misc.Publ.Mus.Zool.Univ.Mich. 93:1-44.

32. Baker-Cohen, K. F. 1961. Visceral and vascular transposition in fishes, and a comparison with similar anomalies in man. Amer.J.Anat. 109(1):37-55, illus.

33. Bale, H. 1935. Observations sur un Turbot anormal: *Scophthalmus (Rhombus) maximus* L. (Poisson Teleosteen Pleuronectide). Bull.Soc.Sci.Bretagne 11:168-176, 6 figs.

34. Ballot, 1837. Notice sur deux carpes monstrueuses pêchées dans les étangs. Mem.Soc.Roy.Sci.,Orléans 1:212, 220, 2 pls.

35. Balon, E. and Frank, S. 1953. Fund der goldene Aberation der Bartbrundel (*Nemachilus barbatulus* aberr. *erythrina* Berg, 1933) in Schlesien. Věstn.čsl.Spol.zool. 17:143-148, 3 figs., pl.

36. Banta, A. M. 1921. Flat-fishes with unusual pigmented areas. Anat.Rec. 20:214-215.

37. Barbieri, C. 1906. Sull'origine delle monstrosità embrionali doppie nei Teleostei. Atti Soc.ital.Sci.nat. 45:100-106.

38. Barfurth, D. 1899. Eine Larve von *Petromyzon planeri* mit drei Schwanzspitzen. Arch.EntwMech.Org. 9:27-31, 3 figs.

39. Barnard, K. H. 1935. Notes on South African marine fishes. Ann.S.Afr.Mus. 30:645-658, 7 figs., 3 pls.

40. _____ 1948. Further notes on South African marine fishes. Ann.S.Afr.Mus. 36:341-406, 17 figs., 5 pls.

41. Barraclough, W. E. 1956. An abnormal long-nosed skate (*Raja rhina*) from British Columbia. Rep.prov.Mus.nat.Hist.B.C. 1955:57-58, fig.

42. Barras de Aragón, F. de las 1905. Noticia de algunos monstruos existentes en el gabinete de historia natural de Huelva. Bol.Soc.esp.Hist.nat. 5:322-324.

43. Barrington, D. 1768. A letter — on some particular fish found in Wales. Phil.Trans. 57:204.

44. Bateson, W. 1890. Pilchards with the number of scales abnormally increased. Proc.zool.Soc.Lond. 1890:586-588.

45. _____ 1894a. On specimens of the common pilchard (*Clupea pilchardus*) showing variation in the number and size of scales. Proc.zool.Soc.Lond. 1894:164.

46. _____ 1894b. On two cases of colour variation in flat-fishes, illustrating principles of symmetry. Proc.zool.Soc.Lond. 1894:246-249, pl.

47. _____ 1894c. Materials for the study of variation. Macmillan. London.

48. _____ 1895. Note in correction of a paper on colour variation in flat-fishes. Proc.zool.Soc.Lond. 1895:890-891.

49. Bath, H. 1956. 'Siamesische Zwillinge' bein "Kleinen Maulbrüter". Aquar.-u.Terrar.Z. 9:284-286.

50. Bean, B. A. 1889. Double-headed animals. For. & Str. 33:164.

51. _____ 1909. A remarkable carp. For. & Str. 73:1022.

52. Bean, T. H. 1911. An albino brook trout. For. & Str. 36:314.

53. Bellotti, C. 1905. Di una notavole varietà di colorazione della *Tinca* commune. Atti Soc.ital.Sci.nat. 44:218-220, pl.

54. _____ 1906. Di una notavole varietà di colorazione della *Tinca* commune. Riv.mens.Pesca 8:12-13, fig.

55. Benson, N. G. 1958. Hermaphroditism in the cutthroat trout. Copeia 1958(3):239-240.

56. Berg, L. S. 1908. Sur un exemplaire de la truite (*Salmo trutta* L.) d'une coloration étrange. Annu.Mus.zool.Acad.St.-Pétersb. 13:35-36.

57. _____ 1928. Irregularities of the body-formation in lampreys. Proc.Congr.zool.Anat.Histol.,USSR 3:59-61.

58. Berry, J. 1935. An interesting case of semicyclopia in a shark. J.Bombay nat.Hist.Soc. 37:912-916, 4 pls.

59. Bert, P. 1863. Reproduction de l'extrémité caudale enlevée chez des poissons osseux. C.R.Soc.Biol.,Paris 5:100-101.

60. Berzins, R. 1943. Über monströse Dorsche im Rigaschen Meerbusen. Folia zool.hydrobiol.,Riga 12:244-247, fig.

61. Bettoni, E. 1895. Casi di emiteria presentati dal luccio. R.C. Ist. lombardo 28:1012-1017.

62. Bezier, T. 1902. Sur quelques cas d'albinisme et de mimétisme. Trav.sci.Univ.Rennes 1:191-194; *also* Bull.Soc.sci.méd.Ouest 11:127-131.

63. Bhatt, Y. M. and Murti, N. N. 1960. Hyperostosis in *Trichiurus haumela* (Forskål). J.Univ.Bombay 28(5):84-89.

64. Bigelow, H. B. and Schroeder, W. C. 1953. Fishes of the Gulf of Maine. Fish.Bull.,U.S. 53:1-577, illus.

65. Billard, G. 1912. Allongement inusité des nageoires chez une tanche vulgaire. Bull.Soc.zool.Fr. 37:276-278, fig.; *also* 1913. Bull.Soc.Aquic.Pêche 25:4-5.

66. Bishop, S. C. 1946. Reversal in the winter flounder. Science 103(2667):174-175.

67. Blanc, H. 1913. *Petromyzon planeri* manquant des orifices branchiaux externes. Verh.schweiz.naturf.Ges. 95:230-231.

68. Blanchard, R. 1894. Anormalies des nageoires chez le protoptère. Bull.Soc.zool.Fr. 19:54-57, 8 figs.

69. Bloch, M. E. 1782-1785. Oeconomische Naturgeschichte der Fische Deutschlands. Berlin, 3 pts. in 1 & atlas.

70. Böckh, G. 1863. Ueber eine eigenthümliche Verkrüppelung des Karpfens (*Cyprinus carpio* L.). Correspbl.Ver.Naturk., Presburg 2 Jahrg.(Verh. 7 Jahrg.) p. 107.

71. Bolau, C. C. H. 1881. Ueber eine gelbe varietät vom Flussaal, *Anguilla vulgaris* Fl. Arch.Naturgesch. 47(1):136-139; *also* 1882. Ann.Mag.nat.Hist. 9:65-67.

72. Bonde von, C. 1929. Note on the Heterosomata (Flatfishes) of South Africa, with some examples of teratology. Spec. Rep.Fish.Mar.biol.Surv.S.Afr. 3:1-7, 4 pls.

73. _____ and Marchand, J. 1929. A case of "Siamese Twins" in the spiny dogfish (*Squalus fernandinus*). Nature,Lond. 123: 795-796, 2 figs.

74. Borcea, J. 1904. Sur un cas de conformation anormale de l'oviducte droit chez une petite roussette (*Scyllium canicula*). Bull.Soc.zool.Fr. 29:138-148.

75. Boring, A. M. and Han-Hsin, W. 1936. The reversal of symmetry in two Chinese dogfishes. Peking nat.Hist.Bull. 11(1):17-20, pl.

76. Bosinceano, A. 1934. Sur un cas de monstre double incomplet chez *Squalus acanthias* Risso. Ann.Sci.Univ.Jassy 19:339-344, 4 figs.

77. Boulenger, G. A. 1891. Renewed left pectoral limb of a *Protopterus annectens.* Proc.zool.Soc.Lond. 1891:147-148.

78. _____ 1893. Note on the variations of the lateral shields in the three-spined stickleback. Ann.Mag.nat.Hist. 11:228-229.

79. _____ 1899. (Exhibition of a specimen of a fish (*Polypterus congicus*) from the River Congo with abnormal opercular gills). Proc.zool.Soc.Lond. 1899:554-555.

80. _____ 1908. Exhibition of, and remarks upon, a remarkably malformed plaice (*Pleuronectes platessa*). Proc.zool.Soc. Lond. 1908:161-164.

81. Boutiere, H. 1958. Les scorpaenides des eaux marocaines. Trav. Inst.sci.chérif. 15:1-84, 5 pls.

82. Bovet, D. 1931. L'orientation des viscères chez les truites doubles. Bull.biol. 65(2):216-233, 4 figs.

83. Bovien, P. 1919. On some aberrant gill structures in teleosts. Math.-fys.Medd. 70:291-297, 2 pls.

84. Brander, T. 1955. Om Könsdiformismen-hos sjö-och dammrudan (*Cyprinopsis carassius vulgaris* Krög. och *C. c. gibelio* Bloch) Förelopande meddelande. Memor.Soc.Fauna Fl.fenn. 30: 52-53, fig.

85.Brandt, H. J. and Preytag, G. E. 1950. Drei Wirbelsäulen-eine Knockenanomalie bei einem Herring. Mitt.Mus.Naturk. Magdeb. 2:179-182, 2 figs.

86. Brandt, J. F. 1850. Ueber Albinismus und eine abweichende Farbenspielart des Sterläd (*Acipenser ruthenus*). Bull.Acad. Sci.,St-Pétersb. 10:13-16.

87. Branson, B. A. 1961. A unilateral eye deficiency in *Catostomus luxatus.* Sthwest.Nat. 6(3-4):198-199.

88. Breder, C. M., Jr. 1922. Hermaphroditism of a croaker, *Micropogon undulatus* (Linnaeus). Zoologica, N.Y. 2(13):281-284, fig.

89. _____ 1934. The ultimate in tailless fish. Bull.N.Y.zool.Soc. 37(5):141-145, 6 figs.

90. _____ 1938. An unusual aberrantly colored pleuronectid. Zoologica, N.Y. 23(4):393-395, pl.

91. _____ 1945. Compensating reactions to the loss of the lower jaw in a cave fish. Zoologica, N.Y. 30(2):95-100, 2 figs., pl.

92. _____ 1953. A case of survival of a goldfish following loss of its tail. Zoologica, N.Y. 38(1):49-52, 2 pls.

93. _____ 1954. A second case of survival by a trout without a lower jaw. Zoologica, N.Y. 39(1):13-16, fig.

94. Brindley, H. H. 1891. On a specimen of the white bream (*Abramis blicca* Bloch) without pelvic fins. Proc.zool.Soc.Lond. 1891: 108-109, pl.

95. _____ 1900. Note on some abnormalities of the limbs and tail of dipnoan fishes. Proc.Camb.phil.Soc. 10(6):325-327, pl.

96. Brofeldt, P. 1912. Epämuodostuneista hauenpäistä (Über missgebildte Köpfe von *Esox lucius*). Medd. Soc.Fauna Fl.fenn. 38:13-16 (in German pp. 199-200).

97. Bruch, C. 1862. Ueber eigenthümliche Fortsätze der Fischwirbel welche von den Wirbelfortsätzen der höheren Thiere verschieden sind. Z.wiss.Zool. 11:170-178.

98. Brunn von, M. 1901. Ein Gold-Stuhr. Nerthus 3:260-261.

99. Buckland, F. T. 1875. Log-book of a fisherman and zoologist. London, 407 pp., 4 pls.

100. _____ 1877. Snub-nosed salmon. For. & Str. 8:96.

101. Buen de, F. 1926a. Una mutacion en la sardina. Bol.Pescas, Madr. 11:225-227, fig.

102. _____ 1926b. Une mutation de la *Sardina pilchardus* (Walbaum). Bull.Soc.zool.Fr. 51:229-230, fig.

103. Bugnion, E. 1880. Description de quelques alevins de truite monstreux. Bull.Soc.vaud.Sci.nat. 16:463-466.

104. Bukirev, A. I. and Pushkina, Z. M. 1957. Malformation in fishes. Vop.Ikhtiol. 9:147-151, 3 figs.

105. Bumpus, H. C. 1898. A recent variety of the flatfish (*Pseudopleuronectes americanus*) and its bearing upon the question of discontinuous variation. Science 7:197-198.

106. Bureau, L. 1890. Sur une monstruosité de la raie estellée (*Raja asterias* Rond.). Bull.Soc.zool.Fr. 14:313-316, figs.

107. Buschkiel, A. 1907. Zur Frage nach dem Ursprung anomaler Flossenbildungen bei Fischen. Wschr.Aquar.-u.Terrarienk. 4:66-68.

108. Cable, L. E. 1940. A two-headed embryo of the pipefish *Syngnathus floridae*. J.Elisha Mitchell sci.Soc. 56(1):135-139.

109. Cabo, F. L. 1942. Nota sobre dos casos de coloracion anormal en el *Parapristipoma mediterraneum* (Guichenot), procedentes de la campana del "Abrego." Bol.Soc.esp.Hist.nat. 40:399-401, pl.

110. _____ 1945. Nota sobre un caso de bicefalismo en al "*Squalus blainvillei* (L.)" Bol.Soc.esp.Hist.nat., 43(3-4):147-148, fig.

111. Caldwell, D. K. 1957. The biology and systematics of the pinfish, *Lagodon rhomboides* (Linnaeus). Bull.Fla.St.Mus.biol. Sci. 2(6):78-173, 22 figs.

112. Canestrini, R. 1883. Nota sui pesci mostruosi. Atti Soc.Sci. Padua 9:117-125.

113. Carlet, M. G. 1879. Sur une truite mopse. J.Anat.,Paris 15: 154-160.

114. Carvalho, J. de P. 1954. Notulas ictiologicas. II. Deformacao de porcao posterior du coluna vertebral, em um representante da fam. Atherinidae. Bol.Inst.oceanogr.,S. Paulo 5:179-185, 3 figs., 3 pls.

115. Catala, R. 1949. Sur un cas tératologique remarquable chez un chaetodontide de genre *Heniochus*. Bull.Soc.zool. Fr. 74:108-111, pl.

116. Certain, A. 1932. Une curiosité ichthyologique. Bull.Soc.linn. Seine-Marit. 18:77-79.

117. Chabanaud, P. 1926. Fréquence, symétrie et constance spécifique d'hyperostoses externes chez divers poissons de la famille des Scienides. C.R.Acad.Sci.,Paris 182:16-47.

118. _____ 1927a. Hyperostoses externes des poissons de la famille des Sciaenidae. Arch.Mus.Hist.nat.Paris 6(2):35-47, 2 pls.

119. _____ 1927b. Description d'un poisson nouveau d'Indochine, appartenant a la famille Sciaenidae. Bull.Mus.Hist.nat., Paris 33:230.

120. _____ 1928. Hypertrophy of external bones considered as an element of metabolism in fishes belonging to the family Sciaenidae of the Indo-Pacific region. Proc.Pan-Pacific sci.Congr.,Tokyo 2:2267.

121. _____ 1935. Quelques monstruosités chez des poissons heterosomes sympiezospondylie, atelurie et sphincturie. Arch. Mus.Hist.nat.Lyon 15:1-23, 4 pls.

122. _____ 1936. Multiplication tératologique de la papille urinogénitale chez un male de *Brachirus muelleri* Steindachner (Teleostei Pleuronectoidea Soleidae). Bull.Mus.Hist.nat., Paris 8(5):394-397, fig.

123. _____ 1946. Soleides spécifiquement affectes d'une atrophie totale de l'oeil migrateur. C.R.Acad.Sci.,Paris 223(13): 486-487.

124. _____ 1948. Description d'un *Symphurus* totalement inverse. Bull.Soc.zool.Fr. 73:134-136, fig.

125. _____ 1949. Quelques monstruosités chez les Cynoglossides. Bijdr.Dierk. 28:90-96, 5 figs.

126. _____ 1954. Notules ichthyologiques. Bull.Mus.Hist.nat., Paris 26(2):464-467.

127. Chaine, J. 1926. Apterie pelvienne totale chez un Rotengle (*Scardinius erythropthalmus* L.). P.V.Soc.linn.Bordeaux 78:129.

128. Chamberlain, E. B. 1934. Mutilated tails of sting rays. Copeia 1934(1):34.

129. Charvet, P. A. 1826. Explication d'une monstruosité observee sur le cyprin doré de la Chine. Bull.Soc.philom.Paris 1:140-141.

130. Chidester, F. E. 1914. Twins in fish, one with a cyclopic deformity. Anat.Rec. 8:367-369, 4 figs.

131. _____ 1926. A Pacific salmon with three eyes. Amer. Nat. 60: 293-296, 6 figs.

132. Churchill, S. 1834. Notice of a double fish (*Felichthys felis*). Amer. J.Sci. 26:116-117, fig.

133. Clark, F. Reproduction of a fish's tail. Amer.Nat. 8:363-364.

134. Clay, W. M. and Carter, B. T. 1957. An albino brook lamprey, *Lampetra aepyptera* (Abbott), in Kentucky. Trans. Ky.Acad. Sci. 18(1):12-13.

135. Coates, C. W. 1950. Double-tailed swordtail appears. Aquarium, Philad. 19:123-124, fig.

136. Cobbold, T. S. 1855. Description of a malformed trout, with preliminary remarks. Rep.Brit.Ass. 25(2):109-110.

137. _____ 1858. Notice of a variety of cod, termed the "Lord Fish." Proc.R.phys.Soc.Edinb. 1:51-52.

138. Code, M. P. 1950. Cutthroat trout without dorsal fins. Progr. Fish Cult. 12:85-86.

139. Coggi, A. 1891. Un'anomalia in un embrione di selacio. Mem. R.Accad.Bologna 1:353-362.

140. _____ 1892. Un'anomalia in un embrione di selacio. Mem. R.Accad.Bologna 2:762-763.

141. Collett, R. 1897. On *Chlamydoselachus anguineus* Garm., a remarkable shark found in Norway, 1896. in Festkr. H.M.Kong Oscar II ved Regjeringsjubilaeet 1897, K.Fredriks Univ., Christiana 2:1-17, fig., pl.

142. Collinge, W. E. 1915. Note on an interesting abnormality in the mandibular arch of *Chimaera monstrosa*. Ann.Mag.nat.Hist. 16:110-113.

143. Coolidge, A. 1870. Monstrosities among trout. Amer.Nat. 3: 288-290.

144. Cori, C. J. 1896. Ueber paarige After-und Schwanzflossen bei Fischen. S.B.'Lotos' 16:43-46.

145. Cornay, J. E. 1847. Sur un cas de mopsie observé chez une truite saumonée. C.R.Acad.Sci.,Paris 25:116-118.

146. Cornish, T. 1884. (A ling which had practically developed five backbones). Trans.Penzance Soc. 1:436.

147. Cortese, F. 1868. Sopra una anomalia riscontrata nei nervi ottici di un pesce. Mem.R.Ist.veneto 14:55-72.

148. Coste, M. 1855. Origine de la monstruosité double chez les poissons osseux. C.R.Acad.Sci.,Paris 40:868-876, 931.

149. Couch, J. 1865. The history of the fishes of the British islands. London, vol.4, 439 pp., 73 pls.

150. _____ 1868. Irregularities of structure in fishes. Student & Intel.Observer 1:328-336.

151. Crawford, D. R. 1925. Synostosis in the spinal column of the rainbow trout. Univ.Wash.Publ.Fish. 1:77-84, 4 figs.

152. _____ 1927. Notice of hermaphroditism in silver salmon, *Oncorhynchus kisutch*. Copeia 1927(163):34.

153. _____ 1948. Some monstrosities among fish. Maryland Nat. 18:45-49, 4 figs.

154. Crossman, E. J. 1961. Grass pickerel, *Esox americanus vermiculatus* with supernumary fins. Copeia 1961(2):235-236, 2 figs.

155. Cuénot, L. 1905. Présentation d'une sole à deux faces colorées C.R.Soc.Biol.,Paris 58:914-916.

156. _____ 1906. Sur une sole à deux colorées. Trav.Lab.Soc.sci. Arcachon 8:82-89, fig.

157. Cunningham, J. T. 1892. The evolution of flatfishes. Nat.Sci. 1:191-199, 635-638.

158. _____ 1893. Researches on the coloration of the skins of flatfishes. J.Mar.biol.Ass.U.K. 3:111-118.

159. _____ 1894. Flat-fishes. Rep.Plymouth Instn. 11:30-42, 2 pls.

160. _____ 1895. North Sea investigations. J.Mar.biol.Ass.U.K. 4:10-47.

161. _____ 1907a. A peculiarly abnormal specimen of the turbot. J.Mar.biol.Ass.U.K. 8:44-46, pl.

162. _____ 1907b. On a peculiarly abnormal specimen of turbot. Proc.zool.Soc.Lond. 1907:174-181, pl.

163. _____ and MacMunn, C. A. 1893. On the coloration of the skins of fishes, especially of Pleuronectidae. Phil.Trans. (B) 184:765-812, 2 pls.

164. Cuvier, G. and Valenciennes, A. 1828-49. Histoire naturelle des Poissons. Paris, vol.20:21; vol.21:335.

165. Dalton, H. C. and Goodrich, H. B. 1937. Chromatophore reactions in the normal and albino paradise fish, *Macropodus operculatis* L. Biol.Bull.,Woods Hole 73:535-541, fig.

166. D'Ancona, U. 1933. Alcuni esemplari anomali di batoidei adriatici. Mem.Com.talassogr.ital. 202:3-13, 5 figs; *also* Thalassia jon. 1(3):1-13, 5 figs.

167. Daniel, J. F. 1934. The elasmobranch fishes. Univ.Calif.Press, Berkeley, 332 pp.

168. Dawson, C. E. 1962a. Notes on anomalous American heterosomata with descriptions of five new records. Copeia 1962 (1):138-146, 6 figs.

169. _____ 1962b. Partial albinism in the fish *Astroscopus y-graecum* Cuvier. Copeia 1962(4):837-838, fig.

170. Day, F. 1878. On some Irish Gasterostei. J.Linn.Soc.(Zool.) 13:110-114, 3 figs.

171. _____ 1880-1884. The Fishes of Great Britain and Ireland. Williams and Norgate, London, 2:68,98-102, pl.171, fig.2.

172. Dean, B. 1903. Albinism, partial albinism and polychromism in hag-fishes. Amer.Nat. 37:295-298, 3 figs.

173. Delphy, J. 1916. Déformation remarquable de la bouche chez un Grondin gris (*Trigla gurnardus*). C.R.Acad.Sci.,Paris 162: 97-100.

174. _____ 1917. Deux cas d'atrophie de la nageoire ventrale chez le Chabot buffle (*Cottus bubalis*). Bull.Soc.zool.Fr. 42:118-121.

175. _____ 1919. Notices Ichthyologiques iv. Anomalies de la region caudale chez les *Pleuronectes* (*Pleuronectes* L. *s. str.* Gthr.). Bull.Soc.zool.Fr. 44:353-359.

176. _____ 1922. Diverses anomalies de *Pleuronectes* (Note preliminiaire). C.R.Ass.avanc.Sci.Fr. 45:648-651, 5 figs.

177. Demel, K. 1927. Quatre cas de la coloration des *Pleuronectes*. Kosmos,Lwów 51:228-236, pls.

178. Deraniygala, P. E. P. 1933. Two shark monstrosities. Ceylon J.Sci. 17(3):243-244, pl.

179. Desbrosses, P. 1932. Étude de la dorade courte (*Pagellus curtis* Couch, anomalie de *Pagellus centrodontus* Delaroche). Bull. Soc.zool.Fr. 56(5):399-410, 7 figs.

180. Deslongchamps, J. A. E. 1853. Mémoire sur une raie bouclée monstrueuse. Mem.Soc.linn.Normandie 9:138-144.

181. _____ 1861. Remarques sur quelques anomalies dans la configuration de plusieurs vertébrés de la plie commune, *Pleuronectes platessa* L. Bull.Soc.linn.Normandie 6:44-50, pl.

182. Despax, R. 1935. Une carpe anormale provenant de la Garonne à Toulouse. Bull.Soc.Hist.nat.Toulouse 67:395-397, fig.

183. Deubler, E. E. and Fahy, W. E. 1958. A reversed ambicolorate summer flounder *Paralichthys dentatus*. Copeia 1958(1):55.

184. Dieulafé, L. and Bruyant, C. 1904. Une carpe adulte. C.R. Ass.Anat. 6:207.

185. Djerjugin, K. M. 1912. Bemerkungen über den Bau und die Entwicklung der paarigen Extremitäten der Knochenfishe. I. Ueber das Auftreten von äusseren Brustflossen während der Entwicklung von *Symbranchus* (Subord. Symbranchii). II. Ein seltener Fall von Anomalie bei den Knochenfischen. Anat.Anz. 41:456-460, 3 figs.

186. Dohrn, A. 1902. (A double *Torpedo* embryo). Stud.Urgeschichte des Wirbeltierkörpers. Mitt.zool.Sta.Neapel 15:31, fig.,pl.

187. Donnadieu, A. L. 1870. Sur une hémipterie de volume observée chez une carpe. C.R.Acad.Sci.,Paris 70:200-220.

188. Donovan, E. 1806. The natural history of British fishes. London, 5 vols.

189. Droogleever Fortuyn-van Leyden, C. E. 1917. Over een aal met het linkeroog in de onder kaak. (On an eel having its left eye in the lower jaw). Versl.gewone Vergad.Akad. Amst. 25:1168-1170 (English transl. pp. 1120-1122).

190. Duhamel du Monceau, H. L. 1777. Traité generale des pêsches. Paris, 4 vols.

191. Duncker, G. 1896. Variation und Verwandtschaft von *Pleuronectes flesus* und *P. platessa* L., untersucht mittelst der Heincke' schen Methode. Helgoländ.wiss.Meeresunters. 1(2):47-104, 20 figs., 4 pls.

192. _____ 1900. Variation und Asymmetrie bei *Pleuronectes flesus* L., statistisch untersucht. Zool.Anz. 23:141-148; *also* Helgoländ.wiss.Meeresunters. 3:333-406, 3 figs., 4 pls.

193. _____ 1906. Ueber Regeneration des Schwanzendes bei Syngnathiden. Arch.EntwMech.Org. 20:30-39, pl.

194. _____ 1907. Ueber Regeneration des Schwanzendes bei Syngnathiden. Arch.EntwMech.Org. 24:656-661, 2 figs., pl.

195. _____ 1908. Syngnathiden-Studien. I. Variation und modification bei *Siphonostoma typhle* L. Hamburg Jahrb.wiss.Anat. 25:1-115.

196. _____ 1950. Sur inversion der Augenstellung bei Plattfischen. Mitt.hamburg.zool.Mus. 50:131-176, 4 figs.

197. Dupont, A. and Vandaele, R. 1959. Un cas de tumeur mélanique chez un poisson albinos *Protopterus annectens* Owen du Congo. Bull.Soc.roy.Zool.,Anvers 11:1-8, 3 figs.

198. Dyakonov, F. 1929. Eine Blei mit anormal entwickelter Rückenflosse. Russk.gidrobiol.Zh. 8:252-253, fig.

199. Dyce, R. 1860. On the identity of *Morrhua punctata* and *Morrhua vulgaris*. Ann.Mag.nat.Hist. 5:366-369, 3 pls.

200. Dyk, V. 1935. Fehlen der Bauchflossen bei einer plötze (*Leuciscus rutilis* L.). Arch.Hydrobiol. 28:459-461, 2 figs.

201. _____ 1951. Neobvykly pripod ploutevni zakrnelosti okouna. (Unusual fin deformation in perch). Akvarist.Listy 23: 115.

202. Ehrström, K. E. 1919. Studien am Kopfskelett von *Gadus morrhua* und *Lumpenus lampetriformis* bei Fallen von Mops-und Rundköpfigkeit. Acta Soc.Fauna Flora fenn. 46(3):1-34, 3 pls.

203. Eigenmann, C. H. and Cox, U. O. 1900. Some cases of saltatory variation. Science 12:300; *also* 1901. Amer.Nat. 35:33-38.

204. _____ and Kennedy, C. H. 1903. Variation notes. Biol.Bull. Woods Hole 4:227-229.

205. Eisler, R. 1963. Partial albinism and ambicoloration in winter flounder, *Pseudopleuronectes americanus*. Copeia 1963(2):275-277, 2 figs.

206. Ekmann, G. 1901. Über einen Fall von Rückbildung der letzten, Kiemenspalte bei *Squalus acanthias* L. Ofvers.finska VetenskSoc.Förh. 52(9):1-6, 4 figs.

207. Elmhirst, R. 1911. On some ambicolored flat-fish from the Clyde. Ann.Soc.nat.Hist. 78:77-79; *also* Zoologist 15:30-33.

208. Elwin, M. G. 1957. Pathological melanosis in an intergeneric hybrid. Nature, Lond. 179:1245-1255, fig.

209. Emeljanov, P. 1907. Zwillinge von *Girardinus caudimaculatus*, eine bemerkenswerthe erscheinung. Naturfreund. St-Pétersb. 2:239-242.

210. Ercolani, G. B. 1881. Della polidactylia e della polimelia nell'-uomo e nei vertebrati. Mem.R.Accad.Bologna 3:727-828, 4 pls.

211. Erhard, G. 1748. De cyprino monstroso rostrato. Inaug. Dissert., Jena, 8 pp., pl.

212. Fabani, C. 1897. Un bel caso di monstruosità riscontrato in una trota. Boll.Nat.,Siena 17:42.

213. Fabre-Doumergue, P. and Biétrix, E. 1905. Développement de la Sole (*Solea vulgaris*). Introduction à l'étude de la pisciculture marine. Paris, 247 pp., 8 pls.

214. Fasciolo, A. 1904. Due casi di deformazione nel *Labrax lupus*. Atti Soc.ligust.Sci.nat.geogr. 15:92-99, pl.; *also* Boll.Mus. Zool.Anat.comp.,Genoa 127:1-8, pl.

215. Fatio, V. 1875. Sur le développement différent des nageoires pectorales dans les deux sexes et sur un cas particulier de mélanisme chez le véron (*Phoxinus laevis* Agass.) et quelques autres Cyprinides. Arch.Sci.phys.nat. 52:29-44.

216. Federley, H. 1908. Monströsa torskar (Monströse Dorsche). Medd.Soc.Fauna Fl.fenn. 34:68-74, pl.

217. Fehlmann, J. W. 1912. Ein mundloser Karpfen. Int.Rev.Hydrobiol. 2(2):1-6, pl.

218. Festa, E. 1900. Di un caso di icterismo nel *Petromyzon planeri* Bloch. Boll.Mus.Zool.Anat.comp.,Torino 15(367):1-2.

219. _____ 1915. Un caso di icterismo nel *Barbus plebejus* Val. Boll. Mus.Zool.Anat.comp.,Torino 30(696):1-2.

220. Fiebiger, J. 1904. Über Missbildungen bei Fischen. Öst.Fisch-Ztg. 14:

221. _____ 1907. Ein Karpfen mit fehlender Schwanzflosse. Öst. FischZtg. 5:83-85.

222. Filhol, H. 1889. Description d'un cas de monstruosité observée sur un *Rhombus vulgaris*. Bull.Soc.philom.Paris 2:54-55, fig.

223. Filippi de, F. 1852. Nota sopra una singolare monstruosità di una razza (*Trygon pastinaca* Bonap.). Nuova Ann.Sci.Nat. Bologna 5:65-68, pl.

224. Fischer von, J. 1874. Flavismus bei einer Schmerle, *Gobitis (Nemachilus) barbatula*. Zool.Gart.,Lpz. 15:471.

225. Fitzsimons, V. 1951. Note on a blind mirror carp (*Cyprinus carpio*). Fauna & Flora,Pretoria 2:29-30, fig.

226. Fleming, J. 1841. Description of a species of skate (*Hieroptera abredonensis*) new to the British fauna. Edinb.New Phil. J. 31:236-238, 2 pls.

227. Flintoff, R. J. 1896. A peculiarity in perch. Nature,Lond. 54:492.

228. Follett, W. I. 1942. Another aberrant color-phase of *Amphisticus argenteus*. Copeia 1942(1):49-50, fig.

229. _____ 1954. The case of the piebald flounder. Pacif.Discov. 7(5):24-25, 2 figs.

230. Forbes, S. A. 1885. Aberration in the perch. Amer.Nat. 19:192.

231. Ford, E. 1930. Some abnormal fishes received at the Plymouth Biological Laboratory. J.Mar.biol.Ass.U.K. 17(1):53-64, 8 figs., 5 pls.

232. _____ and Bull, H. O. 1926. Abnormal vertebrae in herrings. J.Mar.biol.Ass.U.K. 14:509-517.

233. Forest, J. 1950. Sur une anomalie de la caudale chez *Gadus luscus*. Bull.Soc.zool.Fr. 75:129-133, 2 figs.

234. Frade, F. 1929. Une nouvelle espèce ou une aberration individuelle de l'*Oxynotus centrina* (L.). Bull.Soc.portug.Sci. nat. 10(22):263-267, 2 figs.

235. _____ 1930a. Anomalies chez le thon rouge. Bull.Soc.portug. Sci.nat. 11(1):1-5, 4 figs.

236. _____ 1930b. L'anomalie faciale du thon rouge et son importance pour l'étude des migrations. Bull.Soc.portug. Sci.nat. 11(2):7-9.

237. _____ 1932. Notes tératologiques (Mammiferes, Oiseauux et Poissons). Bull.Soc.portug.Sci.nat. 11:165-168, 3 figs., pl.

238. Frank, S. 1958. Zweiter Fund der goldenen Aberation der Bartgrundel (*Nemachilus barbatulus* aberr. *erythrina* Berg, 1933) in der Tschechoslowakei. Mem.Soc.zool.tchécosl. 22:199-202, 2 figs.

239. Franz, V. 1910. Zur Physiologie und Pathologie der Chromatophoren. Biol.Zbl. 30:150-158.

240. _____ 1925. Ermittelungen zur naturlichen Elimination gescheckter Schollen (*Pleuronectes platessa* L.) in Kampf uns dasein. Biol.Zbl. 44:675-702, 4 figs.

241. Freeburg, B. 1887. White trout. Ludlow trout ponds. For.& Str. 10:134.

242. Freund, L. 1907. Anomalien des Fischskeletts. Ergebn. allg. Path.path.Anat. 11(2):709-729.

243. _____ 1914. Eine abnorme Darmbildung beim Karpfen. Öst. FischZtg. 11:37-38.

244. Freye, H. A. 1952. Ein Fall von Kyphoskoliose bei einer Plötze. Wiss.Z. Martin - Luther - Univ.math. - nat. 1(1-2):139-141, 4 figs.

245. Fuhrmann, O. 1880. Un cas d'hermaphrodisme chez vengeron (*Leuciscus rutilus*) du lac de Neuchâtel. Bull.Soc.neuchâtel. Sci.nat. 36:82-85.

246. Gadeau de Kerville, H. 1892. Description d'un poisson et d'un oiseau monstrueux. J.Anat.,Paris 28(5):563-566.

247. _____ 1895. Note sur une plie franche et un flet vulgaire atteints d'albinisme. Bull.Soc.zool.Fr. 20:155-156.

248. Galikov, V. 1914. (Ein Fall von Missbildung). Charikov Bull. Soc.nat. 3(5):57-58.

249. _____ 1915. (Une monstruosite rare chez la *Perca fluviatilis*). Nasha Okh. 9(11):39-40.

250. Gallien, L. 1944. Sur un cas d'arrhenoidie chez *Lebistes reticulatus*. Bull.Soc.zool.Fr. 70:104-106, 3 figs.

251. Garman, S. and Denton, S. F. 1886. Abnormal embryos of trout and salmon. Sci.Obsr.,Boston 5:1-7.

252. Garstang, W. 1898. Malformation of the mouth in the common sea-bream (*Sparus centrodontus*). J.Mar.biol.Ass.U.K. 5:345-347.

253. _____ 1900a. An albino hake (*Merluccius merluccius*). J.Mar.biol. Ass.U.K. 6:275-276.

254. _____ 1900b. Albinism and natural selection. Nature,Lond. 62:620-621.

255. Gemmill, J. F. 1900a. Cyclopia in osseous fishes. Rep.Brit.Ass. 1900:784-785.

256. _____ 1900b. The anatomy of symmetrical double monsters in the trout. Proc.roy.Soc.(B) 68(444):129-134.

257. _____ 1903. A contribution to the study of double monstrosities in fishes. Proc.zool.Soc.Lond. 1903:4-23, 4 pls.

258. _____ 1906a. On cyclopia in osseous fishes. Proc.zool.Soc. Lond. 1906:443-449, pl.

259. _____ 1906b. Notes on supernumary eyes and local deficiency and reduplication of the notochord in trout embryos. Proc.zool.Soc.Lond. 1906(1):449-452, pl.

260. _____ 1912. The teratology of fishes. James Maclehose and Sons, Glasgow, 73 pp., 26 pls.

261. Geoffroy Saint Hilaire, I. 1832. Histoire générale et particulière des anomalies de l'organization chez l'homme et les animaux. Paris, 3 vols., atlas.

262. Gervais, F. L. P. 1864. Cas de polymélie (membres surnuméraires) observés sur un batracien du genre *Pelobates* et sur une espèce du genre *Raia*. C.R.Acad.Sci.,Paris 59:800-803.

263. Gervers, F. W. K. 1954. A supernumary pelvic fin in the Powan (*Coregonus clupeoides* Lacépède). Nature,Lond. 174:935.

264. Gesner, C. 1556. De piscibus et aquatilibus omnibus libelli III novi. I. Scholia et emendationes in Halieuticon P. Ovidii Nasonis. II. Aquatilium animatium enumeratio juxta Plinium, emendata et explicata, serie literarum. III. Eorundem nomenclator Germanicus longe copiossissimus. Et alia quaedem ad piscium historiam pertinentia. Tiguri, vi + 280 pp., 18 pls.

265. _____ 1558. Historiae animalium liber IIII, qui est de piscium - - - - etc. Tiguri, 1297 pp., pls.

266. Geyer, E. 1936. Eine Plötze (*Leuciscus rutilus* L.) ohne Bauchflossen aus dem Heidensee in Östholstein. Arch.Hydrobiol. 30:497-501, 5 figs.

267. Ghirardelli, E. 1958. Su di un esemplare di *Platichthys flesus italicus* (Günther) anomalo. Doriana 2(90):1-5, pl.

268. Giard, A. 1892. Sur la persistance partielle de la symétrie bilatérale chez un turbot (*Rhombus maximus* L.), et sur l'hérédité des caractères acquis chez les pleuronectes. C.R.Soc. Biol.,Paris 4:31-34.

269. _____ 1900. Sur un cas de Palistrophe chez la Loche d'étang (*Cobitis fossilis* L.). C.R.Soc.Biol.,Paris 52:93-94.

270. Gibbs, E. G. 1956. A bisexual steelhead. Calif.Fish Game 42(3): 229-231.

271. Gill, T. N. 1881. Record of recent scientific progress in zoology. Annu.Rep.Smithson.Instn. 1880:365-375.

272. _____ 1896. Notes on the genus *Cephaleutherus* of Rafinesque, and other rays with aberrant pectoral fins (*Propterygia* and *Hieroptera*). Proc.U.S.nat.Mus. 18(1054):195-198.

273. Girdwoyn, M. 1880. Pathologie des Poissons. Traite des maladies des monstruosités et des anomalies des oeufs et des embryons. J. Rothschild, Paris, 19 pp., 11 pls.

274. Goeldi, E. A. 1898. Further notes on the Amazonian *Lepidosiren*. Proc.zool.Soc.Lond. 1898:852-857, 3 figs.

275. Goetsch, W. and Schindler, O. 1934. Doppelbildungen bei Fischen. S.B.Ges.Morph.Physiol.München. 43:1-8, 8 figs.

276. Goff, C. C. 1935. A case of melanism in *Lepisosteus osseus*. Copeia 1935(1):41, fig.

277. Goode, G. B. 1875a. Albinoism in fishes. For. & Str. 4:231.

278. _____ 1875b. Albino fishes. Amer.Nat. 9:517; *also* Rod & Gun 7:43.

279. Goodrich, H. B. and Smith, M. A. 1937. Genetics and histology of the color pattern in the normal and albino paradise fish, *Macropodus opercularis* L. Biol.Bull.,Woods Hole 73:527-534, 3 figs.

280. Gordon, M. 1953a. Inheritance of golden and albinism in swordtails. Aquarium J. 24:175-183, 3 figs.

281. _____ 1953b. Inheritance of albinism in the paradise fish. Aquarium J. 24:245-246.

282. Goryunova, A. I. 1956. (The problem of teratology in carp). Sborn.Rab.Ikhtiol.Gidrobiol. 1:261-268.

283. Gottschalk, C. 1955. Eine häufige Anomalie des Mandibularen (I) Aortenbogens bei *Lebistes reticulatus* Peters unter Berüksichtigung der normalen Entwicklung. Anat.Anz. 102: 96-101, 4 figs.

284. Gottsche, C. M. 1835. Die seeländishen *Pleuronectes* - Arten. Arch.Naturgesch. 2:133-186.

285. Goubeau, A. 1938. Une carpe bouledogne. Bull.Soc.Hist.nat. Creusot. 6:59-61.

286. Gray, I. E. 1960. Unusual pigmentation in the flounder, *Paralichthys lethostigma*. Copeia 1960(4):346-347, fig.

287. Green, M. 1945. A malformed skull of *Aplodinotus grunniens* Rafinesque. Trans.Kans.Acad.Sci. 47:355-357, fig.

288. Greenbank, J. 1942. Malformation in the lower jaw of a bluegill. Copeia 1942(3):188-189, fig.

289. _____ 1945. Abnormal fin configuration in a carp. Copeia 1945(3):178, fig.

290. Gregory, W. K. 1932. Some strange teleost skulls and their derivation from normal forms. Copeia 1932(1):53-60, 3 figs.

291. Greven, U. 1953. Wirbelsäulenverkrummung einer Plötze (*Leuciscus rutilus*). Gewäss.u.Abwäss. 1:70-76, 9 figs.

292. Greig, J. 1911. Syk og monstrøs ørret. (Kranke und monströse Forellen). Naturen 35:27-31.

293. Grimm, G. 1906. (Ein Stör mit drei Rogensäcken). Vest.Rybopromsyl.,St-Pétersb. 21:287.

294. Grochmalicki, J. 1908. Über die Linsenregeneration bei den Knochenfischen. Z.wiss.Zool. 89:164-172.

295. Gross, W. 1942. Über Knochen-Missbildungen bei Asterolepiden. Paläont.Z. 23:206-218, 5 figs., 2 pls.

296. Grosser, O. and Przibram, H. 1906. Einige Missbildungen beim Dornhai (*Acanthias vulgaris* Risso). Arch.EntwMech.Org. 22: 21-37, 3 figs., pl.

297. Gudger, E. W. 1928a. A three-eyed haddock, with notes on other three-eyed fishes. Amer.Nat. 62:559-570, 6 figs.

298. _____ 1928b. Guillaume Rondelet's pug-headed carp. Nat. Hist.,N.Y. 28:102-104, 2 figs.

299. _____ 1929a. An unusually large (53 mm) two-headed brook trout, *Salmo fontinalis*. Amer.Mus.Novit. 369:1-10, 2 figs.

300. _____ 1929b. An adult pug-headed brown trout, *Salmo fario*, with notes on other pug-headed salmonids. Bull.Amer. Mus.nat.Hist. 58:531-559, 16 figs., pl.

301. _____ 1930a. Fishes with two mouths. Amer.Mus.Novit. 444:1-7, 2 pls.

302. _____ 1930b. Pug-headedness in the striped bass, *Roccus lineatus*, and in related fishes. Bull.Amer.Mus.nat.Hist. 61:1-19, 3 pls.

303. _____ 1930c. The three-eyed haddock, *Melanogrammus aeglefinus*, a "fake." Ann.Mag.nat.Hist. 6:44-48, fig.

304. _____ 1933a. A malformed tail and spine of the sting-ray, *Dasyatis hastata*. Copeia 1933(4):186-190, 2 figs.

305. _____ 1933b. A round headed silver perch, *Bairdiella chrysura*, with notes on the earliest figured round-headed fish. Amer.Mus.Novit. 613:1-5, 4 figs.

306. _____ 1933c. A pug-headed grunt, *Haemulon plumieri*. Amer. Mus.Novit. 607:1-6, 4 pls.

307. _____ 1933d. A second barn-door skate, *Raja stabuliforis*, with pectorals non-adherent to the head. Amer.Mus.Novit. 600:1-10, 9 figs.

308. _____ 1933e. Abnormal dentition in rays, Batoidei. J.Elisha Mitchell sci.Soc. 49(1):57-96, 21 figs., pl.

309. _____ 1934. Ambicoloration in the winter flounder, *Pseudopleuronectes americanus*. Amer.Mus.Novit. 717:1-8, 4 figs.

310. _____ 1935a. Two partially ambicolorate flatfishes (Heterosomata) 1, A summer flounder, *Paralichthys dentatus* 2, A rusty dab, *Limanda ferruginea*. Amer.Mus.Novit. 768:1-8, 3 figs.

311. _____ 1935b. Abnormalities in flatfishes (Heterosomata) I. Reversal of sides. A comparative study of known data. J.Morph. 58:1-39, 5 figs.

312. _____ 1936a. A reversed almost wholly ambicolorate summer flounder, *Paralichthys dentatus*. Amer.Mus.Novit. 896: 1-5, 3 figs.

313. _____ 1936b. Ambicoloration, partial and complete, in the southern flounder, *Paralichthys lethostigmus*. Amer.Mus.Novit. 897:1-7, 6 figs.

314. _____ 1936c. Beginnings of fish teratology, 1555-1642. Belon, Rondelet, Gesner and Aldrovandi, the fathers of ichthyology, the first to figure abnormal fishes. Sci.Mon.,N.Y. 43:252-261, 8 figs.

315. _____ 1937a. An albino tarpon. Nat.Hist.,N.Y. 40:649-652, 5 figs.

316. _____ 1937b. Abnormal dentition in sharks, Selachii. Bull. Amer.Mus.nat.Hist. 73:249-280, 21 figs.

317. _____ 1937c. An albino tarpon, *Tarpon atlanticus*, the only known specimen. Amer.Mus.Novit. 944:1-4, 2 figs.

318. _____ 1937d. A pug-headed two-lined dab, *Lepidopsetta bilineata*, the only known pug-headed flatfish. Amer.Mus.Novit. 959:1-5, 3 figs.

319. _____ 1938. Ten two-headed trouts from 32 mm to 203 mm long the record size. J.Elisha Mitchell sci.Soc. 54:205-233, 4 figs., 3 pls.

320. _____ 1941. A totally ambicolorate flounder, *Platichthys stellatus*, from Alaskan waters. Copeia 1941(1):28-30.

321. _____ 1945. Reversal in the winter flounder, *Pseudopleuronectes americanus*: the three known cases. Science 102(2661): 672-673.

322. _____ 1946a. Unusual finny heads and faces. Nature Mag. 39:317-319, 330, 13 figs.

323. _____ 1946b. An albino rusty dab, *Limanda ferruginea*, with notes on other abnormalities in flatfishes. J.Elisha Mitchell sci.Soc. 62(1):73-76, fig.

324. _____ and Firth, F. E. 1935. An almost totally ambicolorate halibut, *Hippoglossus hippoglossus*, with partially rotated eye and hooked dorsal fin—the only known specimen. Amer. Mus.Novit. 811:1-7, 2 figs.

325. _____ 1936. Three partially ambicolorate four-spotted flounders, *Paralichthys oblongus*, two each with a hooked dorsal fin and a partially rotated eye. Amer.Mus.Novit. 885:1-9, 6 figs.

326. _____ 1937. Two reversed partially ambicolorate halibuts, *Hippoglossus hippoglossus*. Amer.Mus.Novit. 925:1-10, 5 figs.

327. Guerra, M. 1957. Monstruosita d'origine traumatica in una trota (*Salmo fario*). Natura,Milano 48:143, fig.

328. Gunter, G. 1941. A rare abnormality, a fish with reversed scales. Copeia 1941(3):176.

329. _____ 1943a. A "dumpy" croaker, *Micropogon undulatus* (Linnaeus), and its significance with respect to rapid species change. Copeia 1943(1):52-53, fig.

330. _____ 1943b. A colorless southern flounder, *Paralichthys lethostigma* Jordan and Gilbert from Texas. Copeia 1943(4): 254-255, 2 figs.

331. _____ 1945a. Another redfish, *Sciaenops ocellatus* (Linnaeus) with reversed scales. Copeia 1945(1):55, fig.

332. _____ 1945b. Studies on the marine fishes of Texas. Publ.Inst. Mar.Sci.Univ.Texas 1(1):1-190.

333. _____ 1948. A discussion of abnormal scale patterns in fishes, with notice of another specimen with reversed scales. Copeia 1948(4):280-285.

334. _____ 1956. A description of a red drum, *Sciaenops ocellata*, without eyes, with a consideration of the implications. Amer.Nat. 90(853):267-269.

335. _____ and Ward, J. W. 1961. Some fishes that survive extreme injuries, and some aspects of tenacity of life. Copeia 1961(4):456-462, 11 figs.

336. Günther, A. 1866. Catalogue of fishes in the British Museum. London, vol. 6, p. 67.

337. _____ 1871. Black variety of *Platyglossus notopis*. Proc.zool. Soc.Lond. 1871:667.

338. Gupta, P. D. and Bhowmik, R. M. 1958. An interesting case of albinism in *Arius jella* Day from India. Sci.&Cult. 24 (6):283.

339. Halbertsma, H. J. 1864. Normaal en abnormaal hermaphroditismus by de visschen. Versl.gewone Vergad.Akad.Amst. 16:165-178.

340. Hamai, I. 1936. (A case of caudal fin anomaly in the carp). Zool.Mag.,Tokyo 48:940-941, 2 figs.

341. Hamberger, G. E. 1748. De Cyprino monstroso rostrato. Jena, 8 pp., 4 pls.

342. Hanada, Y. 1925. (Anomalies found in larva of *Oncorhynchus keta*). Suisan Gaku Zasshi 28:1-4.

343. Hanko, B. 1922a. Csiki Ernö allattani kutatasai Albania ban (Explorationes zoologicae ab E. Csiki in Albania practae) I. Fische. Balkan-Kutat.Tud.Eredm. 1: 6 pp., pl.

344. _____ 1922b. Torzfejü halak a Magyar Nemzeti Museum halgyüjtemenebol. (Über monströse Fischkopfe aus der Sammlung des Ung. National Museums). Allatt Kozlem. 21:11-17, 10 figs.

345. Hansen, D. F. 1940. A case of extreme curvature of regenerating fin rays. Trans.Ill.Acad.Sci. 33(2):211-212, 2 figs.

346. _____ and Shoemaker, H. H. 1943. Pigment deficiency in the carp and the carpsucker. Copeia 1943(1):54.

347. Harabath, R. 1928. Über die Heilung von Schnittwundung der Haut bei Fischen. Arch.Path.Anat.,Berlin 268:794-815, 7 figs.

348. Hardenberg, J. D. F. 1935. Miscellaneous notes on India fishes I-IV. Natuurk.Tijdschr.Ned.-Ind. 95:49-57, fig.

349. Hardouin, R. 1933. Anomalies tératologiques chez des poissons Cyprinides. Bull.Soc.Sci.nat.méd.Seine-et-Oise 1(506):60-61, 2 figs.

350. Harper, W. F. 1933. Supernumary pectoral fins in *Raja circularis* Loudon. Proc.roy.Soc.Edinb.(B) 53(1):26-30, 2 figs.

351. Haskins, C. P. and Haskins, E. F. 1948. Albinism, a semi-lethal autosomal mutation in *Lebistes reticulatus*. Heredity 2:251-262, pl.

352. Hazzard, A. S. 1943. Record of an "albino" lake trout, *Cristivomer namaycush namaycush* (Walbaum). Copeia 1943(4):253.

353. Hefford, A. E. 1908a. Note on a hermaphrodite cod (*Gadus morrhua*). J.Mar.biol.Ass.U.K. 8(3):315-317, fig.

354. _____ 1908b. Note on a conger with abnormal gonad. J.Mar. biol.Ass.U.K. 8:318-319, fig.

355. Heincke, F. 1892. Variabilität und Bastardbildung bei Cyprinoiden. *in* Festschrift zum siebenzigsten Geburtstage R. Leuckarts, p. 64-73, figs., pls., Berlin.

356. Heldt, H. 1948a. Sur des cas curieux de malformations d'ovaries chez *Mugil cephalus* Cuvier. Bull.Soc.Sci.nat.Tunis 1:34-35, 4 figs.

357. _____ 1948b. Contribution a l'étude de la biologie des lacs tunisiens. Bull.Sta.océanogr.Salambô 41:1-35, 20 figs.

358. Herald, E. S. 1953. The 1952 shark derbies at Elkhorn Slough, Monterey Bay and at Coyote Point, San Francisco Bay. Calif. Fish Game 39:237-243, 3 figs.

359. Herbst, H. O. 1957. Bauchflossenlose Hechte. Gewäss.u.Abwäss. 8:77, fig.

360. Herdman, W. A., Scott, A. and Johnstone, J. 1905. Report on the investigations carried on during 1904 in connection with the Lancashire Sea-Fisheries Laboratory at the University of Liverpool, and the Sea-Fish Hatchery at Piel, near Barrow. Rep.Lancs.Sea-Fish.Lab. 1904:1-128, figs., pls., *also* Proc.Lpool.biol.Soc. 19:181-304.

361. Herrick, F. H. 1885. An abnormal black bass. Science 6:243-244.

362. Heuscher, T. 1911. Ein Karpfenmopskopf. Schweiz.Fischztg. 19:262-265, 2 figs.

363. Hikita, T. 1955a. Hermaphroditic individual of *Theragra chalcogramma* (Pallas). Collect.&Breed. 17:247, 2 figs.

364. _____ 1955b. (Anomalies found in *Limanda schrenki*). Kagaku 25:428-429.

365. _____ 1958. Occurrence of the mottled dog-salmon, *Oncorhynchus keta* (Walbaum). Sci.Rep.Hokkaido Salm.Hatch. 12: 45-49, fig., pl.

366. Hilgendorf, F. M. 1891. Ein Krankhaft verändertes Gebiss eines Haifisches (*Galeus galeus*). S.B.naturf.Fr.Berl. 1891:64-67.

367. _____ 1903. *Pseudocheilinus hexataenia* Blkr. mit monströser Verdoppelung der Linse. S.B.naturf.Fr.Berl. 1903:3-5.

368. Hill, J. P. 1895. On a fiddler (*Trygonorhina fasciata*) with abnormal pectoral fins. Proc.Linn.Soc.N.S.W. 10:206-208, pl.

369. Hinrichs, M. A. 1938. The microscopic anatomy of twins and double monsters of *Fundulus heteroclitus*. Physiol.Zoöl. 11: 155-157.

370. _____ and Genther, I. T. 1931. Ultra-violet radiation and the production of twins and double-headed monsters. Physiol. Zoöl. 4:461-485, 41 figs., pl.

371. Hirano, Y. 1934. (Ebisu-Ayu or the sweet-fish with shortened vertebral column). Yoshoku-Kiashi 4:55-56.

372. Hirose, H. and Yanada, T. 1955. Notes on the variation found in fishes (5). Collect.&Breed. 17:341-342, 6 figs.

373. Hoese, H. D. and Berglund, C. O. 1958. Coloration in Texas hogchokers, *Trinectes maculatus fasciatus*. Copeia 1958(1): 55-56.

374. Hofer, B. 1901. Über Missbildungen beim Hecht. Allg.Fisch-Ztg. 26(1):14-15.

375. _____ 1904a. Karpfen mit verschlossener Mundspalte. Allg. FischZtg. 29:31, fig.

376. _____ 1904b. Handbuch der Fischkrankheiten. München, xv+359 pp., 222 figs., 18 pls.

377. Holt, E. W. L. 1890. Note on a young specimen of *Zoarces viviparus*. Ann.Mag.nat.Hist. 5:256-257.

378. _____ 1894. Studies in teleostean morphology from the marine laboratory at Cleethorps. Proc.zool.Soc.Lond. 1894: 413-446, 3 pls.

379. _____ 1895. North Sea investigations. J.Mar.biol.Ass.U.K. 3:188-190.

380. Honma, Y. 1956a. (Further notes on the "monophthalmic crucian carp, *Carassius auratus* L." from Niigata Prefecture). Collect.&Breed. 18(11):335-336, 2 figs.

381. _____ 1956b. (A case of a flatfish with reversal of sides). Collect.&Breed. 18(11):348, fig.

382. _____ 1957a. (Additions to "The monophthalmic crucian carp, *Carassius auratus* L." from Niigata Prefecture). Collect.& Breed. 19(10):310-311, 2 figs.

383. _____ 1957b. (A case of the Janus monstrosity found in the chum salmon embryo). Jap.J.Ichthyol. 5(3/6):182-183, 2 figs.

384. _____ 1958a. (On the ambicoloration found in the red halibut, *Hippoglossoides dubius* (Schmidt) from Sea of Japan). Collect.&Breed. 20(2):62-63.

385. _____ 1958b. (On the aberrant body color found in synophthalmic chum salmon parr *Oncorhynchus keta* (Walbaum). Bull.Jap.Soc.sci.Fish. 24(2):93-99, 13 figs.

386. _____ 1959a. (A specimen of a golden Alaska pollack, *Theragra chalcogramma* (Pallas), from the Sea of Japan). Collect.& Breed. 21(7):222, 224, fig.

387. _____ 1959b. (Notes on the aberrant kidney structures found in the ventral aorta of the Ayu, *Plecoglossus altivelis* Temminck and Schlegel). Science, Tokyo 29(1):43-44.

388. _____ 1960. (Notes on *Paramyxine atami* Dean, and a description of a specimen with defective caudal fin). Collect.& Breed. 23(6):182-183, fig.

389. _____ and Duyvene de Wit, J. J. 1962a. Teratologic observations in acheilognathine species and hybrids (Cyprinidae). II. Five cases of uncommon deformities in larval hybrids of bitterling. Bull.Jap.Soc.sci.Fish. 28(11):1056-1063, 10 figs.

390. _____ 1962b. Unusual ovipositor development in a female hybrid between female *Acheilognathus tabira* and male *Acheilognathus limbata* (Cyprinidae, Teleostei). Canad.J.Zool. 40:1013-1017, pl.

391. Hopewell-Smith, A. 1908. Two specimens of the head and jaws of the adult *Hemiramphus*. A specimen showing developmental defects occurring in the upper jaw of a pike (*Esox lucius*). Proc.R.Soc.Med. 1:61-62.

392. Hopley, C. C. 1891. Observations on a remarkable development in the mudfish. Amer.Nat. 25:487-489, 5 figs.

393. Hora, S. L. 1921. Notes on the occasional absence of paired fins in freshwater fishes, with some observations on the two apodal genera *Channa*, Gronow and *Apua*, Blyth. Rec.Indian Mus. 22:27-32.

394. _____ 1927. An albino Magur, *Clarias batrachus* (Linné). J. Asiat.Soc.Beng. 22(3):131-132.

395. _____ 1941. The game fishes of India XIV. The Mahseers or the large-scaled barbels of India. 7. The black mahseer with notes on other color varieties. J.Bombay nat.Hist. Soc. 42(4):803-815, fig., 3 pls.

396. Hornyold, A. G. 1818a. Algunas escamas anormales de la anguila. Bol.Pescas,Madr. 1918:207-212, 11 figs.

397. _____ 1918b. Experiencias sobre la formacion de la pseudoaleta caudal en la anguila. Bol.Pescas,Madr. 1918:263-267, 8 figs.

398. Hotta, H. 1958. Abnormal development of the cranial bones of 'Jack mackerel' *Trachurus japonicus* Temminck & Schlegal with growth. Jap.J.Ichthyol. 7:115-117, fig.

399. _____ and Honma, Y. 1958. A case of a pug headed apodal fish, *Muraenesox cinereus* (Forskål). Collect.&Breed. 20(4): 120, 122, fig.

400. Houghton, W. 1879. British fresh-water fishes. London, 2 vols., 204 pp., 39 pls.

401. Howes, G. B. 1890. Variation in the kidney of the common thornback (*Raia clavata*): its nature, range and probable significance. J.Anat.,London 24:407-422.

402. _____ 1891. On some hermaphrodite genitalia of the codfish (*Gadus morrhua*) with remarks upon the morphology and phylogeny of the vertebrate reproductive system. J.Linn. Soc.(Zool.) 23:539-558, pl.

403. _____ 1893. On some remarkable variations of the respiratory organs of *Petromyzon* and Myxine. Proc.zool.Soc.Lond. 1893: 730-733.

404. _____ 1894. On synostosis and curvature of the spine in fishes, with especial reference to the sole. Proc.zool.Soc.Lond. 1894:95-101, pl.

405. Hsiao, S. T. C. 1941. Melanosis in the common cod, *Gadus callarias* L., associated with trematode infection. Biol.Bull., Woods Hole 80:37-44, 3 figs.

406. Hsueh, F. 1931. "Outfolded operculum" of goldfish *Carassius auratus*. Sci.Rep.nat.Tsing Hua Univ. 1:101-107, 7 figs.

407. Hubbs, C. L. 1941. Increased number and delayed development of scales in abnormal suckers. Pap.Mich.Acad.Sci. 26:229-237, pl.

408. _____ and Hubbs, L. C. 1945. Bilateral asymmetry and bilateral variation in fishes. Pap.Mich.Acad.Sci. 30:229-310, 2 figs.

409. _____ and Whitlock, S. C. 1929. Diverse types of young in a single species of fish, the gizzard shad. Pap.Mich.Acad. Sci. 10:461-482, 10 figs.

410. Hubbs, Clark. 1959. High incidence of vertebral deformities in two natural populations of fishes inhabiting warm springs. Ecology 40(1):154-155.

411. Hussakof, L. 1914. On two ambicolorate specimens of the summer flounder *Paralichthys dentatus*, with an explanation of ambicoloration. Bull.Amer.Mus.nat.Hist. 33:95-100.

412. Hutton, F. W. 1874. Notes on some New Zealand fishes. Trans. Proc.N.Z.Inst. 6:104-107, 2 pls.

413. _____ 1876. Contributions to the ichthyology of New Zealand. Trans.Proc.N.Z.Inst. 8:209-218.

414. Huzum, I. V. 1941. Consideratiuni asupra unei diformationi la aripioarcle pectorale dela Pastruga si Nisetru. (*Acipenser stellatus* Pall.) si (*Acipenser guldenstaedti* Brandt). Bul.Soc. Nat.Român 15:30-33, 3 figs.

415. Hyrtl, C. J. 1849. Vortrag über einige interessante Abweichungen der unteren Wirbelbogen der Fische. S. B.Akad.Wiss. Wien 2:79-85.

416. _____ 1862. Ueber Wirbelsynostosen und Wirbelsuturen bei Fischen. Denkschr.Akad.Wiss.,Wien 20:95-110, 3 pls.

417. Ichikawa, R. 1954. (Studies on the abnormalities of scales in the tumour appearing on the skin of Japanese common goby). Jap.J.Ichthyol. 3:188-192, 5 figs.

418. Ihering, H. 1878. Ueber Wirbelverdoppelung bei Fischen. Zool. Anz. 1:72-74.

419. Ikeda, H. 1936a. (On a deformed specimen of *Tribolodon* sp. collected at Lake Akan, Hokkaido). Bot.&Zool.,Tokyo 4:1549-1552, 6 figs.

420. _____ 1936b. (A carp with a single pair of barbels). Bot.& Zool., Tokyo 4:2141, fig.

421. Imaoka, Y. 1959a. (On the reversal of sides found in *Eopsetta grigorjewi*). Mon.Publ.Shimane Pref.Fish.Exper.Sta. 4(2): 2-6.

422. _____ 1959b. (On the ambicoloration found in *Eopsetta grigorjewi*). Mon.Publ.Shimane Pref.Fish.Exper.Sta. 4(2):7-8.

423. Inouye, K. 1941. A malformation of vertebra in "Sohati Garei" *Protopsetta herzensteini* (Schmidt). Bot.&Zool.,Tokyo 9:737-738, 2 figs.

424. Inukai, T. 1925. On some katadidymous monsters of the salmon larva. Zool.Mag.,Tokyo 37:483-497, pl.

425. Inuo, S. 1936. (A case of deficiency of a counterpart of the paired fins in fish). Zool.Mag.,Tokyo 48:313, fig.

426. Ishii, S. 1916a. (A case of hermaphroditism in trout). Zool. Mag.,Tokyo 28:237-238.

427. _____ 1916b. (Winded vertebral column in the brook trout). Suisan Kenshyu-Shi 11:71-72.

428. Ishikawa, C. 1898. On the variations of the proportional lengths of the head, etc., as to the total length in our common eel. Annot.zool.jap. 2:125-126.

429. Ishikawa, S. 1933. (A note on the occurrence and possible cause of shortening of vertebral column in the striped mullet). Proc.Sci.Fish.Assoc.,Tokyo 5:392-394, fig.

430. Ito, S. 1958. A hermaphrodite gonad found in a *Plecoglossus altivelis*. Collect.&Breed. 20:98, 101, 2 figs., pl.

431. _____ 1960. Abnormal caudal fin in a rainbow trout. Collect. & Breed. 22:43, fig.

432. Iversen, E. S. 1959. Pelagic puzzle. Sea Frontiers 5(3):175-178.

433. Iwanzoff, N. 1893. Ein Fall von scheinbaren Hermaphroditismus bei den Barsch (*Perca fluviatilis*). Bull.Soc.Nat.Moscou 1893:199-205, pl.

434. Jäckel, H. 1867. (An hermaphrodite carp). Abh.naturh.Ges. Nürnberg 3:245.

435. James, P. S. B. R. 1960. Instances of excessive thickening of certain bones in the ribbon fish, *Trichurus lepturus* Linnaeus. J.Mar.biol.Ass.India 2(2):253-258.

436. Jaquet, M. 1897a. Description d'une nageoire pectorale atrophiée chez un *Silurus glanis*. Arch.Sci.Med.,Bucarest 2: 349-351, 6 figs.; *also* (1898) Bul.Soc.roum.Sci. 7:496-498, 6 figs.

437. _____ 1897b. Anomalie du museau chez un *Acipenser ruthenus*. Arch.Sci.Med.,Bucarest 2:358-359, fig.; *also* (1898) Bul.Soc. roum.Sci. 7:504-506, fig.

438. _____ 1899a. Anomalie de la région postérieure du corps chez un *Silurus glanis*. Bul.Soc.roum.Sci. :76-791, 4 figs.

439. _____ 1899b. Ligne latérale supplémentaire chez un *Acipenser ruthenus*. Bul.Soc.roum.Sci. 8:791-792, fig.

440. _____ 1902. Étude du squelette céphalique d'une "carpe dauphin." Bul.Soc.roum.Sci. 10:544-557, 2 pls.

441. _____ 1906. Anomalie de la nageoire anale chez les *Sebastes dactyloptera*. Bull.Mus.océanogr.Monaco 79:1-6, pl.

442. _____ 1907. Description de l'extrémité postérieure du corps anormale chez deux *Motella fuscus* Risso. Bull.Mus. océanogr.Monaco 90:1-9, pl.

443. _____ 1911. Sur deux cas de déformation du museau chez *Sargus rondeletii*. Bul.Soc.roum.Sci. 20:290-309, 17 figs.

444. Järvi, T. H. 1909. Ein Fall von Hermaphroditismus bei *Lota vulgaris*. Medd.Soc.Fauna Fl.fenn. 35:226-227.

445. Jayaram Naidu, M. and Bhimachar, B. S. 1933. A cranial abnormality in the Indian mackerel, *Rastrelliger kanagurata*. Curr.Sci. 2:210-211, fig.

446. Jensen, D. 1959. Albinism in the California hagfish, *Eptatretus stoutii*. Science 130(3378):798.

447. John, K. R. 1959. Ecology of the chub, *Gila atraria*, with special emphasis on vertebral curvature, in Two Ocean Lake, Teton National Park, Wyoming. Ecology 40(4):541-550.

448. Johnson, R. H. 1909. The individuality and variation of the pyloric caeca of the Centrarchidae. Trans.Wis.Acad.Sci. Arts Lett. 15(2):713-732.

449. Johnstone, J. 1904. A malformed plaice. Proc.Lpool.biol.Soc. 18:111-112, pl.

450. _____ 1905a. Ichthyological notes. Rep.Lancs.Sea-Fish.Lab. 1905:186-191, 2 figs.

451. _____ 1905b. Abnormally scaled flounders. Proc.Lpool.biol. Soc. 19:301-303, figs.

452. _____ 1906. Ichthyological notes. Rep.Lancs.Sea-Fish.Lab. 1906:200-215, 3 figs.; *also* Proc. Lpool.biol.Soc. 20:330-335, 2 figs.

453. _____ 1907. Ichthyological notes (1) An hermaphrodite hake. (2) Gurnard with malformed lower jaw. Proc.Lpool.biol. Soc. 21:309-315.

454. _____ 1909. An abnormal specimen of the brill. Proc.Lpool. biol.Soc. 23:200-202.

455. Jones, S. and Menon, P. M. G. 1950. An interesting case of ambicoloration in the "pan" sole *Brachirus pan* (Hamilton). Rec.Indian Mus. 48:67-70, fig.

456. Jordan, D. S. and Bollman, C. H. 1890. Description of new species of fishes collected at the Galapagos Islands and along the coast of the United States of Colombia. Proc.U.S.nat. Mus. 12:149-183.

457. Joseph, E. B. 1961. An albino cownose ray, *Rhinoptera bonasus* (Mitchill) from Chesapeake Bay. Copeia 1961(4):482-483, fig.

458. Joseph, H. 1906. Ein Doppelei von *Scyllium* nebst Bemerkungen über die Entwickelung. Anat.Anz. 29:367-372, 2 figs.

459. Jugeat, F. 1921. Description d'une raie squatiniforme. Bull. Mus.Hist.nat.,Paris 27:45-47.

460. _____ 1926. Anomalie des pouches branchiales chez une raie squatiniforme. Bull.Mus.Hist.nat.,Paris 32:59-63, fig.

461. Jussieu (Le Cadet) 1754. Observation sur deux petits poissons réunis par le ventre. Mem.Acad.Sci.Paris 1754:30.

462. Kamita, T. 1936. (A crucian carp with reversed scalation). Chosen no Suisan 12(136):31-33.

463. Kamohara, T. 1934. (Notes on the anomalies, injuries, etc., found in fishes). Zool.Mag.,Tokyo 46:519-525.

464. _____ 1935. (Further notes on the anomalies, injuries, etc., found in fishes). Zool.Mag.,Tokyo 47:679-688.

465. _____ 1954. (Hermaphroditism in *Katsuwonus pelamys* (Linné). Collect.&Breed. 16:362, fig.

466. Kanda, S. 1930. (Xanthochroism in *Parasilurus asotus*). Zool. Mag.,Tokyo 42:197-198, fig.

467. Kapoor, B. G. and Sarkar, H. L. 1955. Notes on four deformed. specimens of the Indian carp, *Labeo rohita* (Hamilton). Proc.nat.Inst.Sci.India 21:129-136, 2 figs., pl.

468. Kasahara, S. 1963. A case of the piebald sockeye salmon, *Oncorhynchus nerka* (Walbaum). Bull.Japan Sea Fish.Res. Lab. 11:123-124, fig.

469. Kataoka, A. 1954. Notes on a double-monster of carp. Collect. &Breed. 16:13, 4 figs.

470. Katayama, M. 1942. (Pink-colored *Tribolodon hakonensis* and one-eyed *Protopsetta herzensteini*). Bot.&Zool.,Tokyo 10: 832, fig.

471. Kato, G. 1934. (Xanthochroism in the mud loach). Yoshoku-Kaishi 4:90.

472. Kaushik, N. K. 1960. On the absence of pelvic fins in *Cirrhina mrigala* (Ham.) and anal fin in *Catla catla* (Ham.). Curr. Sci. 29(8):316-317.

473. Kawakami, S. and Imai, H. 1934. (On the hermaphroditism in *Oncorhynchus keta*). Hokusuishi Jumpo 261:604.

474. Keith, A. 1909. Three demonstrations on congenital malformations of palate, face and neck. Brit.med.J. 2:310-313, 363-367, 438-441, 30 figs.

475. Keller, O. 1911. A halak gerinczoszlopának elferdülése. (Die Verkrümmung der Wirbelsäule der Fische). Term-Tud. Közl. 43:818-819.

476. Kent, W. S. 1873. Permanent and temporary variation of colour in fish. Nature,Lond. 8:25.

477. Kershaw. J. A. 1904. A colour variety of the common eel (*Anguilla australis* Rich.). Vict.Nat. 20:140.

478. Kinoshita, T. 1933. A new case of hermaphroditism in *Carassius auratus* (L.). J.Sci.Hiroshima Univ. 2(12):

479. _____ 1934. (On hermaphroditism in the crucian carp). Zool. Mag.,Tokyo 46:73.

480. Kishinouye, K. 1898. The goldfish and other ornamental fish of Japan. Nat.Sci. 13:39-42.

481. Kitahama, H. 1954. Abnormal scales of herring. Collect.& Breed. 16:273, fig.

482. Klausewitz, W. 1955a. Siamesische Forellenzwillinge. Natur. u.Volk 85:158-163, 5 figs.

483. _____ 1955b. Ein mopsköpfiger Brachsen aus dem Main. Natur.u.Volk 85:246-251, 6 figs.

484. Klaussner, F. 1890. Mehrfachbildungen bei Wirbeltieren. München.

485. Klunzinger, C. B. 1900. Ueber Zwergrassen bei Fischen und bei Felchen insbesondere. Jh.Ver.vaterl.Naturk.Württemb. 56:519-532.

486. _____ 1903. Ueber Melanismus bei Tieren im allgemeinen und bei unseren einheimischen insbesondere. Jh.Ver.vaterl. Naturk.Württemb. 59:267-297.

487. _____ 1907. Ueber neue Funde von schwarzen Fröschen und Forellen in Murgtal. Jh.Ver.vaterl.Naturk.Württemb. 63: 75-76.

488. Knauthe, K. 1891. Ichthyologische Mittheilungen. Zool.Anz. 14:59-61, 259-264.

489. _____ 1892. Ueber Melanismus bei Fischen. Zool.Anz. 15:25.

490. _____ 1893a. Zwei Fälle von latenter Vererbung der Mopsköpfigkeit bei Cyprinoiden. Biol.Zbl. 13:766-767.

491. _____ 1893b. Ichthyologische Notiz. Zool.Anz. 16:109-110, 355-356.

492. Knox, F. J. 1871. Observations on an albino eel. Trans.Proc. N.Z.Inst. 4:378.

493. Kobayashi, H. 1950. (On the abnormal scales of fishes). Collect.&Breed. 12:251, 253, 4 figs.

494. _____ 1953. (Notes on two abnormal Japanese samlets or sweet fish). Collect.&Breed. 15:279-280, fig.

495. _____ 1954. (On the variation of body colour in the loach, *Misgurnus anguillicaudatus*). Collect.&Breed. 16:167-170, figs.

496. _____ 1955. (Notes on the variation found in fishes). Collect. &Breed. 17:215, fig.

497. _____ 1957a. (Two specimens of variation found in Johnny carp, *Carassius auratus* L.). Collect.&Breed. 19:54, fig.

498. _____ 1957b. On the color variations of the mud loach, *Misgurnus anguillicaudatus*). J.Fac.Sci.Hokkaido 13:63-66, 2 figs., pl.

499. _____ and Suzuki, R. 1954. (Notes on the variation found in fishes). Collect.&Breed. 16:313-315, 6 figs.

500. Koch, M. 1912. Ueber ein gehäuftes Vorkommen von Wirbelsäulenverkrümmungen bei Fischen. Berl.klin.Wschr. 49: 323-324.

501. Koh, T. 1932. Osteological variations in the axial skeleton of goldfish (*Carassius auratus*). Sci.Rep.nat.Tsing Hua Univ. 1:109-127, fig., 3 pls.

502. Koller, O. 1925. *Alburnus lucidus* Heck. mit verkümmerter Seitenlinie. Zool.Anz. 64:214-216, 2 figs.

503. _____ 1927. Ein albinotischer Wels (*Silurus glanis*) aus der Donau bei Wien. Zool.Anz. 69:333.

504. Kolmer, W. 1920. Über den Befund einer zweiten Linse (Spontanlentoidbildung) im Auge eines Welses. Arch.Entw-Mech.Org. 46:1-11.

505. Komai, T. 1937. (On the double monster of salmon with particular reference to situs inversus viscerum). Zool.Mag., Tokyo 49:108-109.

506. Komatsu, T. 1958. (Notes on the monophthalmic goldfish, *Carassius auratus* (L.). Collect.&Breed. 20:318, 2 figs.

507. Körner, F. 1931. Eine überzählige Bauchflosse bei einem Stör (*Acipenser sturio*). Roux Arch.EntwMech.Org. 125:293-305, 6 figs.

508. Korschelt, E. 1938. Über die Konstanz im Auftreten von Knockenverdickungen am Fischskelett. S.B.Ges.ges.Naturw. Marburg 73(2):1-16, 3 figs.

509. Koshida, T. 1911. (Hermaphroditic gonad in trout and salmon). Suisan Kenkyu-Shi 6:85-89.

510. Kosswig, C. 1935. Über albinism bei Fischen. Zool.Anz. 110: 41-47, 4 figs.

511. Krauss von, F. 1886. Kopfmissbildung einer Bachforelle. Jh. Ver.vaterl.Naturk.Württemb. 42:345-346.

512. Krüger von, K. 1942. Erneutes Auftreten der Scharbzunge, *Drepanopsetta platessoides* Fabr. in der westlichen Ostsee. Kieler Meeresforsch. 4:18-37.

513. Kulmatycki, W. 1928a. Über die Verkürzung des Unterkiefers beim Dunajeclachs. Kosmos,Lwów 53:147-150, fig.

515. Kunstler, J. and Gruvel, A. 1899. Sur certaines déformations particulières des hématies des poissons. C.R.Acad.Sci., Paris 128:618-620.

516. Kurata, Y. 1959. (On the deformity of sea-fish). Collect.& Breed. 21:277-279.

517. Kuronuma, K. 1940. (Ambicoloration of *Kareius bicoloratus* and *Verasper variegatus*, preliminary note). Zool.Mag., Tokyo 52:92.

518. Kusumoto, T. 1936. (Abnormal embryos of trout). Yoshoku-Kaishi 6:124-126.

519. Kyle, H. M. 1897. Note on the reproductive organs of a hermaphrodite ling. Rep.Fish.Bd.Scot. 15(3):396-398, pl.

520. _____ 1900. Notes and memoranda. J.Mar.biol.Ass.U.K. 6: 617-625, pl.

521. Lachmann, H. 1891. (On a renewed pectoral limb). Zool.Gart., Frankfurt 32:129.

522. Lackey, J. B. 1934. Abnormalities in dogfish. J.Tenn.Acad. Sci. 9(3):242.

523. Ladryet, F. 1921. Sur l'atrophie pigmentaire du foie chez *Scyllium catulus* Cuv. Bull.Inst.océanogr.Monaco 388:1-8.

524. _____ 1929. Sur la dégénérescence d'un appendice copulateur provoquée par la voisinage d'un odontome cutane chez un *Scyllium catulus* Cuv. Bull.Inst.océanogr.Monaco 544:1-4.

525. Lagatu, H. 1887. Anomalies de coloration observées chez une sole et une raie. Acta Soc.Linn.,Bordeaux 41:76.

526. Largaiolli, V. 1904a. Notizie fisiche e biologiche sul Lago di Cepich in Istria. Progr.Ginn.Scuola Reale sup.Pisino 1904: 1-32.

527. _____ 1904b. Ectromelia pelvica simmetrica nelle *Squalus cavedanus* Bp. Progr.Ginn.Scuola Reale sup.Pisino 1904: 33-40.

528. Lavenier, 1895. Une carpe monstre. Bul.Soc.etud.Sci.Angers 24:169-170.

529. Law, N. C. 1944. A hump-backed carp, *Catla catla* (Hamilton). Proc.nat.Inst.Sci. India 10:97-103, 3 figs., 2 pls.

530. Lawler, G. H. 1961. Abnormalities in Lake Erie whitefish. J. Fish.Res.Bd.Can. 18(2):283-285, fig.

531. Lawrence, G. W. 1875. On a mouthless fish. Proc.Acad.nat.Sci. Philad. 27:125-126.

532. Legendre, R. 1935. Une raie anormale (*Raia brachyura* Lafont.). Bull.Soc.zool.Fr. 60:379-383, pl.

533. _____ 1936. Raie bouclee anormale trouvée à Concarneau. Bull.Soc.zool.Fr. 61:314-315, pl.

534. _____ 1938. Anomalie de la caudal chez un Sardine. Bull. Soc.zool.Fr. 62:419-420.

535. Leger, L. 1897. Mutilation pathologique et régénération chez le protoptère. C.R.Soc.Biol.,Paris 4:543-545.

536. Leger, M. 1887. Observation concernant une anomalie du cervelet d'un *Alopias vulpes*. Bull.Soc.philom.Paris 11:160-163.

537. Leghissa, L. 1939. Neurasse innervazione delle pinne e muscolatura in duplicata di *Salmo fario* e *irideus*. Arch.zool. ital. 26:207-247, 9 figs., 2 pl.

538. Lehman, J. P. 1953. Notes Paléoichthyologiques. Ann.Paléont. 38:57-67, 3 figs.

539. Leidy, J. 1875. Observation on a mouthless fish. Proc.Acad.nat. Sci.Philad. 27:124-125.

540. Leonhardt, E. 1906. Über die Mopsköpfbildung bei *Abramis vimba* L. Zool.Anz. 31:53-60, 2 figs.

541. Lereboullet, A. 1855. Sur la monstruosité double chez les poissons. C.R.Acad.Sci.,Paris 40:916, 1028, 1063.

542. _____ 1861. Recherches sur le développement de la truite, etc. Ann.Sci.nat. 16:359-368.

543. _____ 1863. Sur les monstruosités du brochet. Ann.Sci.nat. 20:177-271.

544. _____ 1864. Sur les monstruosités du brochet. Ann.Sci.nat. 1:113-199, 257-320.

545. Letaconnoux, R. 1949. Quelques cas tératologiques chez les poissons. J.Cons. 16(1):50-58, 6 figs.

546. Levander, K. M. 1894. Om förekomsten af *Pleuronectes platessa* i Finska viken. Medd.Soc.Fauna Fl.fenn. 20:92-94.

547. Levison, F. 1878. (A double-headed shark). Nord.Med.Ark. 10(9):

548. Lidth de Jeude, van F. W. 1885. On deformities of the head in Salmonidae. Notes Leyden Mus. 7:259-261.

549. Lindner, M. J. 1929. Albino sardine. Calif.Fish Game 15(2):176.

550. Loeb, J. 1893. Ueber die Entwickelung von Fischembryonen ohne Kreislauf. Arch.ges.Physiol. 54:525-530.

551. Lolov, A. M. 1930. Ein Mopskopf-Karpfen aus dem Oka Fluss. Russk.gidrobiol.Zh. 9:150.

552. Lönnberg, A. J. E. 1892. Ichthyologische Notizen. Bih.svensk. VetenskAkad.Handl. 17(pt.4,no.7):1-12, pl.

553. _____ 1893. Ichthyologische Notizen. Bih.svensk. Vetensk-Akad.Handl. 18(pt.4,no.2):1-13.

554. _____ 1917. En laxoring med tua munnar. Svensk.Fisk-Tidskr. 26:17-20.

555. Lowne, B. T. 1893. Catalogue of the teratological series in the Museum of the Royal College of Surgeons, England. London.

556. Lozano Cabo, F. 1947. Nota sobre un caso de abnormalidad en la Llampuga (*Coryphaena hippurus* L.). Bol.Soc.esp.Hist. nat. 45:413-415, fig.

557. Lucks, R. 1918. Über zwei Missbildungen an Fischskeleten. Zool.Jb.Anat. 40:537-546, pl.

558. Lunel, G. 1880. (Un individu de la loche franche, *Cobitis barcatula* Linn., présentant un cas de développement extraordinaire des ovaries). Arch.Sci.phys.nat. 63:56-58.

559. Lunn, W. G. and Peadon, A. M. 1949. Situs inversus viscerum in cojoined triplets of the brook trout. J.Morph. 84:411-426, 2 figs.

560. Luther, A. 1909. Hermafroditiska exemplar af *Lota vulgaris*. Medd.Soc.Fauna Fl.fenn. 35:227.

561. Luther, G. 1962. On an apparently specific type of abnormality in the white-spotted shovelnose rav, *Rhynchobatis djiddensis* (Forskål). J.Mar.biol.Ass.India 3(1-2):198-203, 2 figs.

562. Luther, W. 1937. Über ein Fall von atypischer Organbildung beim Forellenkeim. Roux Arch.EntwMech.Org. 137:425-434, 3 figs.

563. Lütken, C. F. 1880. Smaa bidrag til Selachiernes naturhistorie. Vidensk.Medd.dansk naturh.Foren.Kbh. 1879:45-68, 3 figs.

564. Lux, F. E. 1959. A case of partial albinism in the four-spotted flounder, *Hippoglossina oblonga*. Copeia 1959(3):253.

565. Lyman, H. 1961. A sixteen pound pugheaded striped bass from Massachusetts. Chesapeake Sci. 2(1-2):101-102.

566. Lynn, W. G. 1938. Cojoined twins and triplets in trout. Anat. Rec. 70:597-617.

567. _____ 1943. Situs inversus viscerum in cojoined trout embryos (abstr.). Anat.Rec. 87(4):28.

568. _____ 1946. Situs inversus viscerum in cojoined twins of the brook trout. J.Morph. 79:1-25.

569. MacDonagh, E. J. 1930. Existencia de escamas atipicas en la corvina blanca, *Micropogon operculatis* (Pisces,Sciaenidae). Act.Congr.Int.biol.Montevideo *in* Arch.Soc.biol.Montevideo Suppl. 1, pp. 70-74, 4 figs.

570. Makarius, S. 1898. Syrian fishes with abnormal eyes. Nature, Lond. 58:149.

571. Makino, S. 1934. (Testis-ovum in the goldfish with a note on its formation). Science,Tokyo 4:325-326, 4 figs.

572. Malloch, P. D. 1910. Life-history and habits of the salmon, sea-trout, trout and other fresh-water fishes. London, 239 pp., illus.

573. Malm, A. W. 1862. Note sur la reproduction des parties de l'organisme et sur leur multiplication chez certains animaux et plus particulièrement chez un syngnathe à deux queues. Ann.Sci.nat. 18:356-358, 4 figs.

574. _____ 1873. Ueber einige Fälle von Zweigeschlechtichkeit welcheer für Zwillingsbildung erklärt, beim Herring (*Clupea harengus* L.) und der Makrele (*Scomber scomber* L.). S.B.Ges.naturf.Fr.Berl. 1873:94-98.

575. Malyatskii, S. 1930. Ein Fall von atavistischer Färbung bei *Caspialosa pontica* Eichw. Russk.gidrobiol.Zh. 9:89-90.

576. Mann, H. 1940. Untersuchungen über die ansteckende Bauchwassersucht des Karpfens und ihre Bekampfung. Zool. Anz. 131:228-238.

577. Mansueti, R. J. 1958. Eggs, larvae and young of the striped bass, *Roccus saxatilis*. Contr.Md.Dep.Res.Ed. 112:1-35.

578. _____ 1960. An unusually large pugheaded striped bass, *Roccus saxatilis*, from Chesapeake Bay, Maryland. Chesapeake Sci. 1(2):111-113, 2 figs.

579. Marchand, E. 1901. Notules de tératologie ichthyologique. A propos de diverses anomalies observées, en 1900, chez quelques poissons de la Loire-Inférieure. Bull.Soc.Sci.nat. Ouest 10:235-246, 3 figs.

580. Markun, M. 1933. Une carpe aux nageoires alongées. Trav.Inst. zool.Acad.Sci.URSS 1:249-250, fig.

581. Marr, J. C. 1945. A specimen of *Engraulis mordax* Girard lacking ventral fins. Copeia 1945(2):115.

582. Martens von, E. 1859. *Leuciscus dobula* (=*L. cephalus*) mit mangelnden Bauchflossen. Mitt.Ver.Nördlich Elbe 3: 73-76.

583. _____ 1879. Hermaphroditische Fische. Naturforscher. 1879: 116.

584. Masterman, A. T. 1895. On hermaphroditism in the cod. Rep. Fish.Bd.Scot. 13(3):297-303, 3 figs.

585. Matsubara, K. 1955. Fish; Morphology and Hierarchy. Ishizaki-Shoten, Tokyo, 3 vol.

586. Matsui, I. 1935. (Anomalies found in the mud loach). Yoshoku-Kaishi 5:139-141.

587. _____ 1936. (On a case of hermaphroditism in the rainbow trout, *Salmo irideus* Gibbons). Science,Tokyo 6:506-507, figs.

588. Matsui, Y. 1925. On the warty growths of Japanese lionhead goldfish. Annot.zool.jap. 10:355-362, 13 figs.

589. _____ 1926. (Albinism in fishes). Suisan Kenkyu-Shi 21: 28-29.

590. _____ 1934. (On the hermaphroditism found in a hybrid between the crucian carp and the true carp). Science,Tokyo 4:371-372, 3 figs.

591. _____ 1936. (On the hermaphroditism found in fresh-water fishes). Nihon Gakujutsu Kyokai Hokoku 11:84-86.

592. _____ and Makino, S. 1935. (On the hermaphroditism found in the hybrids between the crucian and the true carp). Zool.Mag.,Tokyo 47:545-551, fig., pl.

593. Matthews, J. D. 1885. Oviduct in an adult male skate. J.Anat., London 19:144-149, pl.

594. Maxfield, G. H. 1958. Record of a hatchery-reared rainbow trout, *Salmo gairdneri gairdneri*, with three pelvic fins. Copeia 1958(3):232-233.

595. Mayhew, J. 1957. The occurrence of blindness in the black bullhead, *Ictalurus melas* (Rafinesque), of East Okoboji Lake, Iowa. Proc.Iowa Acad.Sci. 64:654-656.

596. Mayhoff, H. 1912. Über das "monomorphe" Chiasma opticum der Pleuronectiden. Zool.Anz. 39:78-86, 6 figs.

597. Mazza, F. 1890a. Annotazioni di teratologia comparata: Caso di ectromelia pelvica sinistra congenita in un *Pagellus erythrinus* C. V. Atti Soc.ligust.Sci.nat.geogr. 1(1):

598. _____ 1890b. Sulla rigenerazione della pinna caudale in alcuni pesci. Atti Soc.ligust.Sci.nat.geogr. 1:318-321.

599. _____ 1893. Eteromorfie di alcuni pesci marini. Atti Soc. ligust.Sci.nat.geogr. 4:427-435, 2 pls.

600. Mazzarelli, G. 1905. L'origine di un paio di pinne pettorali soprannumarie asimmetriche in un avannotto di *Salmo irideus* Gibb. Boll.Soc.lombarda Pesca 7(1-3):13-15, fig.

601. McCormick, R. B. and Baldwin, W. J. 1952. Golden dover sole taken at Eureka. Calif.Fish Game 38(1):134.

602. McHugh, J. L. 1942. Variation of vertebral centra in young Pacific herring (*Clupea pallasii*). J.Fish.Res.Bd.Can. 5(4): 347-360.

603. _____ and Barraclough, W. E. 1951. An abnormal carp, *Cyprinus carpio*, from California waters. Calif.Fish Game 37(4): 391-393, fig..

604. McIntosh, W. C. 1875. Marine Invertebrates and Fishes of St. Andrews. Edinburgh, 195 pp., 28 figs., 9 pls.

605. _____ 1902a. Notes from the Gatty Marine Laboratory, St. Andrews, No. XXIII. Ann.Mag.nat.Hist. 1902:252-260.

606. _____ 1902b. Notes from the Gatty Marine Laboratory, St. Andrews, No. XXII. On abnormal coloration in the Pleuronectidae. Ann.Mag.nat.Hist. 1902:291-308.

607. _____ 1908. Notes from the Gatty Marine Laboratory, St. Andrews, No. XXX. On an abnormal plaice with a precaudal fin-frill on the left side. Ann.Mag.nat.Hist. 1908: 525-528.

608. McKeever, K. L. 1958. Albinism and ambicoloration in the California halibut. Calif.Fish Game 44(2):171-174, 2 figs.

609. McLane, W. M. 1950. An albinistic *Ictalurus catus* from Florida. Copeia 1950(2):149.

610. M'Donald, J. 1930. The tailless trout of Loch Enoch. Trans. Dumfr.Gall.nat.Hist.Soc. 14:299-308.

611. Meckel, J. F. 1815. De duplicitate monstrosa commentarius. Halle u. Berlin.

612. Medcof, J. C. 1946. More reversed winter flounders. Science 103(2677):488.

613. Meek, A. 1910. A three-eyed dab. Rep.Northumb.Sea Fish. Comm. 1909:44.

614. Meinken, H. 1953. Aus dem Verbands und Vereinsleben. Aquar.-u. Terrar.Z. 6:123.

615. Mencl, E. 1903. Ein Fall von beiderseitiger Augenlinsenausbildung während der Abwesenheit von Augenblasen. Arch.EntwMech.Org. 16:328-339, pl.

616. Menon, M. D. 1957. On some abnormal sharks preserved at the Marine Biological Station, West Hill. J.zool.Soc.India 9:200-207, 15 figs.

617. Menshikov, M. I. 1933. Monstrosity cases with *Leuciscus idus* (L.), *Carassius carassius m. humilis* and *Acipenser ruthenus* (L.). Bull.Inst.Rech.Biol.Perm. 8(4-5):227-231. 3 figs.

618. _____ and Bukirev, A. I. 1933. A monstrosity in *Pelecus cultratus* (L.). Bull.Inst.Rech.Biol.Perm. 8(4-5):223-226, pl.

619. Menzel, R. W. 1944. Albino catfish in Virginia. Copeia 1944(2): 124.

620. Mercier, L. and Poisson, R. 1927. À propos d'un cas de macrophthalmie chez une Anguille. C.R.Acad.Sci.,Paris 184:123-125, figs.

621. Meyer, P. F. 1934. Eine linksseitige Scharbzunge (*Drepanopsetta platessoides* Fabr.). Zool.Anz. 107:95-96, fig.

622. Miall, L. C. 1890. Malham Tarn and its fish. Handbook prepared for the meeting of the British Association. York, pp. 3-4.

623. Mitchill, S. L. 1815. The fishes of New York described and arranged. Trans.Lit.Phil.Soc.N.Y. 1:390-391.

624. Moenkhaus, W. J. 1898. Material for the study of the variation of *Etheostoma caprodes* and *Etheostoma nigrum* in Turkey Lake and Tippecanoe Lake. Proc.Ind.Acad.Sci. 1897:207-228.

625. _____ 1902. An aberrant *Etheostoma*. Proc.Ind.Acad.Sci. 1901:115-116.

626. Mookerjee, S. 1948. An atypical scale from *Sciaena coitor* (Hamilton). Nature,Lond. 161:64-65, fig.

627. Moreau, E. 1881. Histoire naturelle des poissons de la France. Paris, 3 vols.

628. Morgan, T. H. 1902. Further experiments on the regeneration of the tail of fishes. Arch.EntwMech.Org. 14:539-561, fig.

629. Morovic, D. Sur un cas de déformation chez *Mugil chelo* Cuv. Notes Inst.océanogr.Split 10:1, 3 figs.

630. Morrill, C. V. 1906. Regeneration of certain structures in *Fundulus heteroclitus*. Biol.Bull.,Woods Hole 12(1):11-20.

631. Moser, F. 1907. Beschreibung einer Duplicitas anterior der Bachforelle und Besprechung der Theorie von Fr.Kopsch über Bildung des Wachstrumszentrums für Rumpf und Schwanz. Anat. Anz. 30:33-52, 81-106.

632. Mudge, G. P. 1899. Male dogfish with abnormal external genital apparatus. J.Anat.,London 34:3.

633. _____ 1905. Exhibition and remarks upon a dogfish with abnormal viscera. Proc.zool.Soc.Lond. 2:490.

634. _____ 1906. An abnormal dogfish (*Scyllium canicula*). Zool. Anz. 30:278-280.

635. Mukerji, D. D. 1927. On two "pug-headed" specimens of the catfish *Aoria gulio* (Ham.Buch.). Rec.Indian Mus. 29:249-251, figs.

636. _____ and Nair, K. K. 1937. Abnormalities in fishes. J.Asiat. Soc.Beng. 2(2):157-164, 6 figs.

637. Müller, J. and Henle, J. 1841. Systematische Beschreibung der Plagiostomen. Berlin, xxii+200 pp., 60 pls.

638. Murgoci-Antonia, A. and Vasiliu, D. G. 1943. Vergleichende anatomischphysiologische untersuchungen bei einem Fall von Kopfmissbildung bei *Carassius gibelio* Bloch. Anal. Inst.Cerc.pisc.Român. 2:141-151, 6 figs., 4 pls.

639. Nader, I. A. 1961. The occurrence of two urinary papillae in the female dogfish shark *Squalus acanthias*. Turtox News 39(10):268-269, fig.

640. Nair, K. K. 1940. On a blind rohu fish, *Labeo rohita* (Ham.). Rec.Indian Mus. 42:25-33, 5 figs.

641. Nakamura, S. 1932. (Fragmental news from Kominato). Yosho-ku-Kaishi 2(8):17-20, 3 figs.

642. Nall, G. H. 1928. The sea trout of the River Ewe and Loch Maree, Part. 2, 1926-1927. Salm.Fish. 2:1-16, pl.

643. Navarro, F. de P. 1928. Un caso teratologico en *Sparus mormyrus* L. Bol.Pescas,Madr. 13:271-272, 3 figs.

644. Newman, H. H. 1908. A significant case of hemaphroditism in fish. Biol.Bull.,Woods Hole 15:207-214, 4 figs.

645. Neydeck, K. J. 1849. Beitrag zur Naturgeschichte der Fische. Jber.Ver.Naturk.Mannheim 15:

646. Nicols, A. 1873. Abnormal coloration in fish (Pleuronectidae). Nature,Lond. 8:46.

647. Nicolsky, G. 1936. Deformity in the operculum of the common Crucian, *Carassius carassius* L. Bull.Soc.Nat.Moscou 45: 327-330, fig.

648. Niimi, T. 1957. Notes on the variation found in fishes. Collect. &Breed. 19:124-125, fig.

649. Nikolskij, G. W. 1929. Ueber eine monströse Kopfform beim Kapelan, *Mallotus villosus* (Müll.). Russk.gidrobiol.Zh. 8:178-180.

650. Ninni, E. 1903a. Sopra una nuova forma di metacromatismo in un *Pleuronectes italicus*. Neptunia,Venezia.

651. _____ 1903b. Sopra alcuni "Pesci mostruosi" raccolti nelle valli del Veneto esturio. Bull.Soc.zool.ital. 4:117-121, 3 figs.

652. _____ 1905. Sopra due casi d'arresto della migrazione oculare (*Pleuronectes italicus* Günth.; *Solea vulgaris* Quens.). Atti Soc.ital.Sci.nat. 44:193-197, fig.

653. _____ 1907. Metacromatismi in pesci raccolti nel mare nelle lagune di Venezia. Atti Congr.Nat.ital. 1907:585-589.

654. _____ 1908. Sopra una nuova forma di metacromatismo. Neptunia, Venezia.

655. _____ 1910. Monstruosita in una *Anguilla*. Riv.Ital.Sci.nat. 30:153-154.

656. _____ 1912. Di un caso di metacromatismo in una *Anguilla*. Riv.mens.Pesca 7:207-208.

657. _____ 1932. Alcune osservationi sulle anomalie nei Pleuronettidi e sopra una forma nuova di *Scophthalmus*. Bull. Soc.zool.Fr. 57:76-84, 3 figs.

658. _____ 1933. Monstruosita in un *Sargus vulgaris* (Geof.) ed in un *Anguilla vulgaris* (Flem.). Boll.Pesca Piscic.Idrobiol. 9:108-112, 3 figs.

659. _____ 1942. Traumatismi, metacromatismi e nuovo caso di arresto della migrazione occulare in pesci dei mari italiani. Atti Soc.ital.Sci.nat. 81(1-2):9-26.

660. _____ 1944. Sopra una monstruosita in un esemplare di *Synaptura commersionana* (Lacép.) Cant. Atti Ist.veneto 103(2): 317-319, 2 pls.

661. Nishikawa, S. 1959. An abnormal form of the air bladder of *Oryzias latipes*. Collect.&Breed. 21:48, 51, 3 figs.

662. _____ and Maeda, H. 1954a. (Reports on the external wound of three fishes). Collect.&Breed. 16:149-150, 3 figs.

663. _____ 1954b. (Reports on the external wound of two fishes). Collect.&Breed. 16:180.

664. Nishimura, S. and Ogawa, Y. 1963. Two new records of anomalous coloration in Japanese Heterosomata with a summary of known records. Bull.Japan Sea Fish.Res.Lab. 11:119-122, 3 figs.

665. Norden, C. R. 1959. Abnormal actinosts in the pectoral girdle of a rainbow trout, *Salmo gairdneri* Richardson, and observations on other bony fishes. Proc.La.Acad.Sci. 22: 69-77.

666. Nordgard, O. 1929. Notes on fishes. K.norske vidensk.Selsk. Forh. 1:22, 24, 63, 75, 129, 186, 200, 206.

667. Norman, J. R. 1926. A report on the flatfishes (Heterosomata) collected by the F.I.S. "Endeavour" with a synopsis of the flatfishes of Australia and a revision of the subfamily Rhombosoleinae. Biol.Res.Fish.Exp."ENDEAVOUR" 5: 217-308, 15 figs.

668. _____ 1927. Ambicolorate flatfishes. Nat.Hist.Mag. 1(2):57-59, figs.

669. _____ 1934. A systematic monograph of flatfishes (Heterosomata). Br.Mus.nat.Hist.,London, viii+459 pp., figs.

670. Noury, E. 1909. Note sur une plie franche (*Platessa vulgaris* Flem.) présentant une coloration anomale. Bull.Soc.Sci. nat.Rouen 44:19-20.

671. Nusbaum, J. 1907. Zur Teratologie der Knochenfische, zugleich ein Beitrag zu deren regeneration. Arch.EntwMech.Org. 24:114-123, pl.

672. Nyström, E. 1889. Om en monströs Form af *Cottus scorpius*. Bih.svensk.VetenskAkad.Handl. 14:1-10, pl.

673. Obrutshew, D. 1928. Abnormal specimen of dentition of *Myliobatis*. Annu.Soc.paléont.russe 7:139-141, fig.

674. Odera, S. 1940. (An albino of *Pseudorasbora parva*). Bot.& Zool., Tokyo 8:1937, fig.

675. Odiorne, J. M. 1937. Morphological color changes in fishes. J.exp.Zool. 76:441-462, 2 pls.

676. O'Donnell, D. J. 1945. A case of ossification of the spinal column in fishes. Trans.Amer.Fish.Soc. 73:41-44.

677. Oka, T. B. 1931. On the accidental hermaphroditism in *Oryzias latipes*. J.Fac.Sci.Univ.Tokyo 2(3):219-223.

678. Okada, Y. K. 1950. A coffer fish with double caudal fins. Zool. Mag.,Tokyo 59:8, 3 figs.

679. Olivier, E. 1914. Un poisson macroptère. Int.Congr.Zool., Monaco 1913:230-232, fig.

680. Oppenheimer, J. M. 1946. A case of atypical twinning in *Fundulus heteroclitus*. Anat.Rec. 95:67-71, fig.

681. Orlandi, S. 1874. Sopra un caso di ermaphroditismo nel *Mugil chelo*. Atti Soc.ligust.Sci.nat.geogr. 13:3-6.

682. Oselladore, R. 1950. Un esemplare di *Mugil chelo* a colonna vertebrale accorciata. Atti Ist.veneto 108:119-122, fig.

683. Otaki, K. 1897. (An ambicolorate flatfish). Zool.Mag.,Tokyo 9:186-187.

684. Otterström, C. V. 1935. Über das Fehlen der Bauchflossen bei Plötzen, Brachen und Karpfen. Arch.Hydrobiol. 29:178-179.

685. Otto, A. W. 1821. Ueber eine neue Roche und eine gleichfalls neue Molluske. Nova Acta Leop.Carol 10:111-126, 2 pls.

686. _____ 1822. Wegen *Propterygia*. Isis (Oken) 1822:463-465.

687. _____ 1841. Monstrorum sexcentrorum descriptio anatomica. Vratislaviae, 266 pp., pls.

688. Ottow, B. 1954. Extrem ausgebildete Skeliosen der Rumpf-Schwanzregion der Wirbelsäule von *Gadus*. Z.Morph. Ökol.Tiere 43:113-123, 4 figs.

689. Ouchi, A. 1953. (An anomaly of the bastard halibut). Circ. Coop.Invest.Fish.Japan Sea, Niigata 27:4.

690. _____ and Kuroiwa, M. 1963. The aberrant body color found in the pink salmon, *Oncorhynchus gorbuscha*. Bull.Japan Sea Fish.Res.Lab. 11:125-127, 2 figs.

691. Paiva, M. P. 1958. Sobre um caso de assimetria em ovarios de *Micropogon furnieri* (Desmarest, 1822) Jordan, 1884. Bol. Inst.oceanogr., S. Paulo 9(1-2):23-27.

692. Palmer, G. and Wheeler, A. C. 1958. Teratological example of an electric ray, *Torpedo nobiliana* Bonaparte. Proc.zool. Soc.Lond. 130:449-454, pl.

693. Panceri, P. 1873. Intorno all'albinismo del *Clarias anguillaris*. R.C.Accad.Napoli 12:110-114.

694. Panum, P. L. 1878. Beiträge zum Kenntniss der physiol.Bedeutung der angebor. Missbildungen. Virchows Arch. 72: 69-91, 165-197, 289-324.

695. Paolucci, L. 1874. Sopra una forma monstruosa della *Myliobatis noctula* Dum. Atti Soc.ital.Sci.nat. 17:60-63, figs.

696. Pappenheim, P. 1905. Ueber Augenverlust und Schädelverbildung bei einem Fisch. S.B.Ges.naturf.Fr.Berl. 1905:7-8.

697. _____ 1907. Ein zweiter Fall von Mopsköpfigkeit bei einem *Lumpenus lampetriformis* (Walb.) aus der Apenrader Föhrde. S.B.Ges.naturf.Fr.Berl. 1907:349-350.

698. _____ 1929. Anomalien in der ausbildung der Seitenlinie (linia lateralis) bei *Lichia amia* (L.) (Fam. Carangidae). S.B.Ges.naturf.Fr.Berl. 1928:226-228, 3 figs.

699. _____ 1933. Künstlich erzeugter Leucismus bei einer Bachforelle. S.B.Ges.naturf.Fr.Berl. 1932(8-10):348.

700. Pardo, L. 1921. Una anomalia en la cola de la anguilla. Bol. Soc.esp.Hist.nat. 21:265-267.

701. _____ 1922. Sobre una cabeza anormal de anguila. Butll. Inst.catal.Hist.nat. 2:89-90, fig.

702. Parenzan, P. 1958. Un caso di "teratocenosi" ittica nel Mar Piccolo di Taranto. Thalassia jon. 1:73-87, 2 pls.

703. Parker, T. J. 1885. On the intestinal spiral-valve in the genus *Raia*. Trans.zool.Soc.Lond. 11(2):49-61, 2 pls.

704. Parsons, R. E. 1942. Black mahseer. J.Bombay nat.Hist.Soc. 43(2):264-265, pl.

705. Patterson, A. H. 1897. Bulldog variety of the sapphirine gurnard (*Trigla hirundo*) at Great Yarmouth. Zoologist 1:239-240, 275-276, fig.

706. _____ 1898. Malformed codfish. Zoologist 2:130, fig.

707. Pavesi, P. 1894. Curioso metacromatismo in *Anguilla*. R.C.Ist. lombardo 27:688-692, pl.

708. Peach, C. W. 1871. On the so-called tailless trout (*Salmo fario*) of Islay. Rep.Brit.Ass. 41:133-134.

709. Pearcy, W. G. 1962. A tail-less flounder. Trans.Amer.Fish.Soc. 91(2):233-234, fig.

710. Pearson, J. C. 1932. Winter trawl fishery off the Virginia and North Carolina coasts. Invest.Rep.U.S.Bur.Fish. 10:1-31.

711. Pégot, G. 1900. Sur quelques anomalies présentées par l'écrevisse, la sangsue, la roussette et le mouton. C.R.Soc.Biol., Paris 52:322-324.

712. Pellegrin, J. 1899. Note sur un anomalie des rayons épineux du *Proteracanthus sarissophorus* Cantor. Bull.Mus.Hist.nat., Paris 1899:356-357.

713. _____ 1900. Sur une raie monstrueuse de la famille des cyclocéphaliens. Bull.Soc.zool.Fr. 25:106-108, 2 figs.

714. _____ 1901. Les poissons à gibbosité frontale. Bull.Soc. philom. Paris 9(3):81-91, 5 figs.

715. _____ 1902. Présentation de quelques cas de déviations rachidiennes chez les poissons. Bull.Soc.zool.Fr. 27:215-219, 3 figs.

716. _____ 1907. Sur la gibbosité frontale chez les poissons du genre *Ptychochromis*. C.R.Acad.Sci.,Paris 144:1168-1170.

717. _____1908a. Sur un cas d'occlusion buccale chez le Hotu. Bull. Soc.Aquic.Pêche 20:87-89.

718. _____ 1908b. Sur une race monstrueuse des perches dauphins observée en Seine a Port-Villez. Bull.Soc.Aqic.Pêche 20:42-46.

719. _____ 1908c. Sur une race monstrueuse de perches. Bull.Soc. zool.,Paris 33:25-27.

720. _____ 1920. Osteome vertebral chez un Siluride. Bull.Soc. zool.Fr. 45:122-123.

721. _____ and Liouville, J. 1918. Sur un Dente a gibbosité frontale pêche sur les côtes du Maroc. Bull.Soc.Sci.nat.Maroc 3:125-127, pl.

722. Pesson, P. 1937. La mutation "mopse" chez *Perca fluviatilis* L. Bull.Soc.Sci.Bretagne 14:51-54, fig.

723. Pettis, C. R. 1903. The albino brook trout. Science 19:867-868; *also* (1903) Rep.For.Comm.N.Y. 1902:295-302, pl.

724. Phillips, C. 1958. An unusually colored garfish, *Lepisosteus platyrhynchus*. Copeia 1958(4):331.

725. Phillips, J. B. 1932. Atavism in a California halibut. Calif. Fish Game 18(4):310-312.

726. _____ 1945. Two unusual flatfishes from Monterey Bay. Calif.Fish Game 31:210-211, fig.

727. _____ 1946. An albino California sardine. Calif.Fish Game 32(1):31-32.

728. Pietschmann, V. 1929. Eine merkwürdige Flossenabnormalität bei *Amia novemfasciata* C.&V. Zool.Anz. 84:91-93, fig.

729. _____ 1930. Ueber eine verkümmerte Fettflosse bei *Macrones gulio* (Ham.Buch.). Zool.Anz. 90:223-224, 3 figs.

730. Pinto, J. dos S. 1954. Una anomalia da coluna vertebral em *Mullus surmuletus* (L.). Rev.Fac.Cienc.Lisboa (C) 4:120-122, pl.

731. Pires de Lima, J. A. 1930. Truite a colonne vertebrate raccourcie. Bull.Soc.portug.Sci.nat. 11(5):47-48, pl.

732. Piton, L. 1935. Notes zoologiques. (c) Note sur une carpe aberrante. Bull.Soc.linn.,Lyon 4:96-97.

733. Planas, A. 1953. Un caso de teratodimia en la mielga (*Squalus acanthias* L.). Publ.Inst.Biol.apl.Barcelona 13:111-113, 2 figs.

734. Poisson, R. and Abbayes des, H. 1940. Sur un nouveau cas de mutation "mopse" chez un poisson Teleosteen: *Merlangus merlangus* L. Bull.Soc.Sci.Bretagne 17:35-36, fig.

735. Pope, E. C. 1945. A fishy monstrosity. Aust.Mus.Mag. 8(11): 383-384, 2 figs.

736. Popov, A. M. 1930. Teratological material from the ichthyofauna of the Black Sea. Bull.Acad.Sci.,Leningrad 10:1053-1078.

737. _____ 1931. Einige Bemmerkungen über die Variationen der Seitenlinien bei *Hexagrammus stelleri* Til. (Pisces, Hexagrammidae). Zool.Anz. 95:51-55, 5 figs.

738. Popovici, Z. 1930. Missbildung der Seitenlinie bei einigen Teleosteen. Zool.Anz. 91:125-138, 8 figs.

739. Poppius, B. 1911. *Esox lucius* mit abnormen Schädel. Medd. Soc.Fauna Fl.fenn. 37(53):217.

740. Pouchet, G. 1892. Remarque sur deux Turbots à face nadirale pigmentée. C.R.Soc.Biol.,Paris 4:200-202.

741. Prince, E. E. 1917. On serially striped haddock in New Brunswick. Rep.Fish.Can.(suppl.) 1917:86-90, pl.

742. Prudhomme, M. 1949. Déformation buccale d'une Dorade. Nature,Paris 3167:69, fig.

743. Punnett, R. C. 1901. On the composition and variations of the pelvic plexus in *Acanthias vulgaris*. Proc.roy.Soc.(B) 68: 140-142.

744. _____ 1902. On the composition and variation of the pelvic plexus in *Acanthias vulgaris*. Proc.roy.Soc.(B) 69:2-26.

745. Putnam, F. W. 1866. Malformation of snout of fishes. Proc. Boston Soc.nat.Hist. 10:68.

746. Quatrefages, J. L. A. 1855a. Formation des monstres doubles chez les poissons. C.R.Acad.Sci.,Paris 40:626-628, 872, 925, 993; *also* Ann.Mag.nat.Hist. 16:47-51.

747. _____ 1855b. Observations sur le mémoire de M.Coste, relatif a l'origine de la monstruosité double chez les poissons osseux. C.R.Acad.Sci.,Paris 40:924-930.

748. _____ 1874. Des monstres doubles dans la classe des poissons. Bull.Soc.Anthrop.Paris 9:318-320.

749. _____ 1888. Mémoire sur la monstruosité double chez les poissons. Mém.publ. par la Soc.Philom. a l'occasion du centenaire de sa fondation, 1788-1888, Paris, pp. 3-34, 2 pls.

750. Rabaud, E. 1901a. Caractères généraux des processus teratogènes, processus primitif et processus consécutif. C.R. Acad.Sci.,Paris 32:1150-1153.

751. _____ 1901b. Fragments de tératologie générale. L'arrêt et l'excès de développement. Bull.Sci.Fr.Belg. 34:481-511.

752. Radcliffe, L. 1928. A barn door skate (*Raja stabuliforis*) with abnormal pectoral fins. Nat.Hist.N.Y. 28:58-63, 7 figs.

753. Radulescu, L. 1943. Über einëuge zwillinge bei *Squalus acanthias* L. aus dem Schwarzen Meere. Anal.Inst.Cerc.pisc. Român. 2:301-303, fig.

754. Raettig, A. 1879. Ein albino unter den Aalen. Arch.Ver. Naturg.Mecklenb. 32:122-123.

755. Rafaele, F. 1889. Sullo spostamento post embrionale della cavita abdominale nei teleostei. Mitt.zool.Sta.Neapel 9: 305-329, 2 pls.

756. Rafinesque, C. S. 1810. Indice d'Ittiologia Siciliana. Presso Giovani del Nobolo, Messina, 70 pp., 2 pls.

757. Rauber, A. 1877. Die theorien der excessiven Monstra. Virchows Arch. 71:133-206.

758. _____ 1878. Die theorien der excessiven Monstra. Virchows Arch. 73:551-594.

759. _____ 1879a. Formbildung und Formstörung in der Entwicklung von Wirbelthieren. Morph.Jb. 5:661-705, 3 pls; *also* Morph.Jb. 6:129-184, 4 pls.

760. _____ 1879b. Gastrodidymus des Lachses. Virchows Arch. 75:553-554.

761. _____ 1880. Ueber die Doppelmonstra der Fische. S.B.naturf. Ges.Lpz. 6:1-2.

762. Rayer, P. F. O. 1843. Exposé succint des principales observations faites jusqu'à ce jour sur les maladies et sur les anomalies des poissons. Arch.Med.Comp.,Paris 1:245-308.

763. Reaumur d', R. A. F. 1747. Description d'un poisson d'un configuration monstrueuse. Mem.Acad.Sci.,Paris 1747:52.

764. Regan, C. T. 1918. A chaetodont fish with markings resembling Arabic characters. Proc.zool.Soc.Lond. 1918:192-193.

765. Reibrisch, J. 1899. Ueber die Eizahl bei *Pleuronectes platessa*. Wiss.Meeresuntersuch. 2(4):233-248, pl.

766. Reichenback-Klinke, H. H. 1952. Ein Aal (*Anguilla vulgaris* Turton) mit doppelter Leber. Nach.naturw.Mus.Aschaffenburg 37:51-54.

767. _____ 1953. Schädelzerstörungen bei Aquarienfischen als Folge einer Mangelerkrankung. Nachr.naturw.Mus.Aschaffenburg 40:49-58.

768. _____ 1954. Ubermässinge Pigmentbildung bei Fisches als Gradmesser einer Gewebsdegeneration. Biol.Zbl. 73:522-549, 20 figs.

769. Reid, G. K., Jr. 1951. Anomalies in two species of centrarchid fishes from Florida. Copeia 1951(1):94.

770. _____ 1954. An ecological study of the Gulf of Mexico fishes, in the vicinity of Cedar Key, Florida. Bull.Mar.Sci.Gulf Caribb. 4(1):1-94.

771. Reinhardt, J. C. H. 1825. Ichthyologiske bidrag. Overs.dansk Vidensk.Selsk.Forh. 1825:2-3.

772. Rennie, J. 1906. Accessory fins in *Raia batis*. Anat.Anz. 28: 428-431, 2 figs.

773. Richard, J. 1912. Monstruosités chez des poissons marins. Nature, Paris 40(1):321-322, 6 figs.

774. Richardson, L. R., Davidson, M. M. and White, A. E. 1944. A case of tortuous orbital arteries in *Galeorhinus australis* Macleay. Copeia 1944(1):47-50, fig.

775. Riedel, K. 1911. Xanthorismus bei einer Ellritze. Bl.Aquar.-u. Terrarienk. 22:150-151.

776. Riggio, G. 1894. Sopra un caso di notavole ramificazione dei ciechi pilorici di *Centrolophus pompilus* Cuv.e Val. Nat. sicil. 13:206-211, 3 figs.

777. Ritchie, J. 1908a. An ambicoloured turbot with eyes approximately normal in position. Ann.Scot.nat.Hist. 1908:146-150, pl.

778. _____ 1908b. A hump-backed trout from Stranraer. . Ann. Scot.nat.Hist. 1908:223-227, pl.

779. Ritzema-Bos, J. 1886. Einige Bemerkungen über Pleuronectiden. Biol.Zbl. 6(9):270-273.

780. Rodd, E. H. 1862. Variety of the turbot (*Rhombus maximus*). Zoologist 20:8199-8200.

781. Romanes, G. J. 1873. Permanent variation in colour in fish. Nature, Lond. 8:101.

782. Rondelet, G. 1554. Libri de piscibus marinis, in quibus verae piscium effigies expressae sunt. Que in tota piscium historium contineaunter, indicat elenchus pagina nona et decima. Postremo accesserunt indices necessarij. Lugundi (Lyons), 23 pp., illus.

783. Rondinini, B. 1938. Alcune osservazioni sopra un caso di triplicata anteriore in *Salmo lacustris*. Monit.zool.ital. 48:165-172.

784. Rose, C. W. 1863. Notice of a monstrosity in a whiting (*Gadus merlangus*). Rep.Brit.Ass. 33:106.

785. Rosenthal, H. L. 1951. Studies on semilethalism in the male lordotic guppy, *Lebistes reticulatus*. J.Hered. 42(5):257-258.

786. _____, Myers, P. R. and Brunings, M. K. 1958. Spinal curvature, a mutation in the swordtail, *Xiphophorus*. J.Hered. 49(5):238-242.

787. _____ and Rosenthal, R. S. 1950. Lordosis, a mutation in the guppy. J.Hered. 41(8):217-218.

788. Rosmini, O. 1901. Ricerche intorno alla variazione del *Petromyzon planeri*. Boll.Mus.Zool.Anat.comp.,Torino 16(390): 1-29.

789. Ross, A. J., Yasutake, W. T. and White, G. R. 1963. Hermaphroditism in rainbow trout. Trans.Amer.Fish.Soc. 92(3):313-315, 3 figs.

790. Rotarides, M. 1941. Missbildungen an Fischen aus dem Balaton-See. Arb.ung.biol.ForschInst. 13:198-201, pl.

791. Roth, W. 1905. Doppelte regeneration eines Bartfadens bei einem Panzerwelse. Bl.Aquar.-u.Terrarienk. 16:408-428.

792. Roule, L. 1915. Description d'une monstrousité par fissure buco-branchiale chez le carpe (*Cyprinus carpio* L.). Bull. Mus.Hist.nat.,Paris 1915:219-221.

793. _____ 1924. Représentation d'un monstre double gasteropage de la truite d'Europe (*Salmo fario* L.). Bull.Mus.Hist.nat., Paris 1924:271.

794. _____ 1937. Considérations sur plusieurs poissons abyssaux de structure aberrante. Bull.Inst.océanogr.Monaco 726: 1-10.

795. Rushton, W. 1937. Blindness in freshwater fish. Nature,Lond. 140:1014.

796. Rutter, C. 1902. Natural history of the Quinnat salmon. Bull. U.S.Fish.Comm. 22:65-141, 19 figs., 11 pls.

797. Ryder, J. A. 1887. *Roccus lineatus* (Bloch) Gill: (The striped bass or rockfish) Hybridization of the striped bass with other fishes. *in* On the development of osseus fishes, including marine and freshwater forms. Rep.U.S.Fish. Comm. 13:502-505.

798. S., G. 1880. Zur abnormalität der Flussbarbe. Öst.FischZtg. 1880:116-117.

799. Sacchi, M. 1898. Su di un caso d'arresto dell'emigrazione oculare, con pigmentazione del lato cieco in un *Rhombus maximus*. Atti Soc.ligust.Sci.nat.geogr. 9:449-451, pls.; *also* Boll.Mus.Zool.Anat.comp.,Genoa 67:1-4, pls.

800. _____ 1899a. Altri casi d'anomalie nel pleuronettidi. Boll. Mus.Zool.Anat.comp.,Genoa 82:1-3.

801. _____ 1899b. Su d'un caso d'inversione nella pleurostasi di una *Solea vulgaris*. Riv.Biol.gen. 1:533-535.

802. Sadoglu, P. 1957. A Mendelian gene for albinism in natural cave fish. Experientia 13:394.

803. Sandemann, G. 1893. On the multiple tumours in plaice and flounders; on a tumour from a tunny; on a parasitic skin disease in Montagu's sucker; and on a cod with one eye. Ann.Rep.Fish.Brd.Scot. 11:291-394, figs.

804. Sandman, J. A. 1906. (Hermaphroditische exemplare von *Clupea harengus*). FiskTdskr.Finl. 15:126-127.

805. Sanz, L. A. 1915. Sobre un caso teratologico de la *Raja macrorhynchus* Rafn. Biol.Soc.espHist.nat. 15(18):470-471, pl.

806. Sarkar, H. L. and Kapoor, B. G. 1956. Deformities in some Indian catfishes. J.zool.Soc.India 8:157-164, 5 figs.

807. _____ and Kaushik, N. K. 1959. Notes on two deformed specimens of Indian carp, *Cirrhina mrigala* (Hamilton). Proc. zool.Soc.India 11(1):39-45, 4 figs.

808. Sasaki, K. 1921. (On a case of hermaphroditism in *Oncorhynchus keta* (Walbaum)). Zool.Mag.,Tokyo 41:233-234, fig.

809. Schaeperclaus, W. 1954. Fischkrankheiten. Akad.-Verlag, 3rd. edn.,xii+708 pp.

810. Schäferna, K. 1939. Über die Verdoppelung der Rückenflosse beim Karpfen. Věstn.čsl.Spol.zool. 1939(6-7):391-418, 9 figs., pl.

811. Schiemenz, P. 1897. Zweisömmerige Karpfen mit vollkommen geschlossenem Munde aus der Fischzuchtanstalt in Grossbeeren. S.B.Ges.naturf.Fr.Berl. 1897:155-156.

812. Schleep, B. C. 1829. Sonderbare Abweichung bei *Pleuronectes maximus* Linn. Isis(Oken) 22:1049-1053; *also* Bull.Sci.nat., Ferrusac 22:137.

813. Schmalgauzen, O. I. 1957. Production of defective olfactory organs in the sturgeon during artificial propagation. Dokl.Akad.Nauk SSSR, Biol.Sci. 114:512-515.

814. Schmidt, H. 1930. Abnorme sclare. Aquar.,Berlin 1930:200, fig.

815. Schmidt, P. 1916. Sur la corrélation des organes dans l'organisme animal. Bull.Acad.Sci.,Petrograd 10:887-894, fig., pl.

816. Schmincke, A. 1907. Die Regeneration der quergestreiften Muskelfasern bei den Wirbeltieren. I. Ichthyopsiden. Eine vergleichend pathologische anatomische Studie. Verh.phys.-med.Ges.Würzb. 39:15-130, 2 pls.

817. Schnakenbeck, W. 1923. Ueber Farbungsanomalien bei Pleuronektiden. Helgoländ.wiss.Meeresunters. 15(10):1-20, pl.

818. _____ 1942. Eine akzessorische Rückenflosse beim Stachelrochen (*Raja clavata*). Zool.Anz. 142:88-90, 3 figs.

819. _____ 1953. Eine Zwillingsbilding bei *Lebistes reticulatus.* Zool.Anz. 151:1-5, 5 figs.

820. _____ 1956. "Siamesische Zwillinge" bei Fischen. Aquar.-u. Terrar.Z. 9:66-68, 4 figs.

821. Schneider, G. 1904a. Ueber einem Fall von Hermaphroditisimus bei *Lota vulgaris.* Medd.Soc.Fauna Fl.fenn. 29:103-105.

822. _____ 1904b. Ueber einem Fall von Hermaphroditisimus bei *Gasterosteus aculeatus.* Medd.Soc.Fauna Fl.fenn. 30:7-8.

823. _____ 1908. Farbenvariationen des Flussbarsches (*Perca fluviatilis*). KorrespBl.NaturfVer.Riga 51:41-46.

824. Schondorff, A. 1903. Ueber den Farbenwechsel bei Forellen. Ein Beitrag zur Pigmentfrage. Arch.Naturgesch. 69(1): 399-426.

825. Schreitmüller, W. 1911. Weitere Fälle von Xanthorismus und Albinismus bei Fischen. Dtsch.Fisch.-Korresp. 15:228.

826. _____ 1929. Blindgeborene *Limia nigrofasciata* un anderes. Aquar.,Berlin 1929:135-136, fig.

827. _____ 1930. Nochmals verkrüppelter Bitterling. Aquar., Berlin 1930:164-165, fig.

828. _____ 1934a. Totalalbinos von *Xiphophorus helleri* Heckel und xanthoristische *Lebistes reticulatus* Peters. Zool.Anz. 106:333-334.

829. _____ 1934b. Ein total-negrino von *Nemachilus barbatulus* Linnaeus. Zool.Anz. 107:1-2.

830. Schultz, R. J. 1963. Stubby, a hereditary vertebral deformity in the viviparous fish *Poeciliopsis prolifica*. Copeia 1963 (2):325-330, fig.

831. Schwalbe, E. 1907. Die morphologie der Missbildungen des Menschen und der Tiere. Jena, 2 vols.

832. Schwartz, F. J. and Curtin, C. B. 1954. An unusual condition in the tropical fish *Mollienesia latipinna*. Copeia 1954(3): 233-234, pl.

833. Schwier, H. 1943. Vitalitätsuntersuchungen an normalen und albinotischen Macropoden. Zool.Anz. 143:33-34, 2 figs.

834. Scott, E. O. G. 1942. Observations on Tasmanian fishes. Pap. roy.Soc.Tasm. 1941:45-54, pl.

835. Scott, W. C. M. 1924. A pathological anomalous thyroid in the barn-door skate (*Raja laevis*). Contr.Canad.Biol. 2:129-134, pl.

836. Seabra de, A. F. 1907. Sur un cas tératologique observé chez *Atherina presbyter* Cuv.et Val. Bull.Soc.portug.Sci.nat. 1:29.

837. _____ 1909. Description des types d'albinisme existants dans les collections du Muséum de Lisbonne; quelques considérations sur l'origine de la couleur blanche chez les vertébrés. Bull.Soc.portug.Sci.nat. 2:256-263.

838. Secques, F. 1895. Deux monstres gasteropages adultes de salmonids. Bull.Soc.zool.Fr. 20:119-123.

839. Seitz, A. 1941. Die Paarbildung bei einigen Cichliden. I. Die Paarbildung bei *Astatotilapia strigigena* Pfeffer. Z.Tierpsychol. 4:40-84, 7 figs.

840. Sekishita, T. 1953. (Xanthochroism in the mud loach). Collect. &Breed. 15:213.

841. Seligmann, C. G. 1898. Supernumary dorsal fin in a trout. Trans.path.Soc.Lond. 49:388-393, fig.; *also* J.Path.Bact. for Oct. 1898, 2 pp., fig.

842. Seligo, A. 1901. Ein bunter Aal. Mitt.westpreuss.FischVer. 13:6.

843. Shaw, G. and Nodder, F. P. 1796. The naturalists miscellany. London, vol. VII.

844. Shaw, T. H. 1934. Notes on a hunchbacked bitterling. China J. 21(1):33-35, 2 figs.

845. Shmal'gauzen, O. I. 1957. Obrazovanie defektnykh oboniatel'nykh organov u oestrovykh ryb lkh iskusstvennom razvedenii. Dokl.Akad.Nauk.SSSR 114(1):216-219.

846. Shufeldt, R. W. 1902. White black bass. Shooting & Fishing 31:349-350.

847. Siebold von, C. T. E. 1861. Ueber den melanotischen Hautausschlag der Cyprinoiden. Versl.Dtsch.naturf. 1860:138-139.

848. Sigalas, R. 1927. Anomalie de structure chez la Torpille. P.V. Soc.linn.Bordeaux 79:47-48.

849. _____ 1929. Sur un Sole a deux faces colorées. P.V.Soc.linn. Bordeaux 81:117.

850. Simmons, E. G. and Breuer, J. P. 1962. A study of redfish, *Sciaenops ocellata* Linnaeus and black drum, *Pogonias cromis* Linnaeus. Publ.Inst.Mar.Sci.Univ.Texas 8:184-211, 13 figs.

851. Sire, M. 1933. Sur un cas de doublement de la nageoire caudale chez une Bouviere: *Rhodeus amarus* Bloch (Teleosteen physostome Cyprinidae). Bull.Soc.Sci.Bretagne 10(1-2): 28-39, 14 figs.

852. Smallwood, W. M. 1908. Notes on the atrophy of the eye of *Raja erinacea*. Science 28:930-931.

853. Smith, H. M. 1907. The fishes of North Carolina. Bull.N.C. geol.econ.Surv. 2:xi+453, 188 figs., 21 pls.

854. Smith, J. A. 1867a. Notice of the occurrence of double or vertical hermaphroditism in a common cod-fish (*Morrhua vulgaris*) recently taken in the Firth of Forth. Proc.R. phys.Soc.Edinb. 3:300-302.

855. _____ 1867b. Notice of various specimens of the deformed variety of *Morrhua vulgaris*, the common cod-fish, the "Lord Fish" of Yarrell, recently taken in the Firth of Forth. Proc.R.phys.Soc.Edinb. 3:302-303.

856. _____ 1870. Notice of true hermaphroditism in the codfish (*Morrhua vulgaris*) and in the herring (*Clupea harengus*). J.Anat.,London 4(2):256-258.

857. Smith, W. R. 1891. A case of hermaphroditism in a haddock (*Gadus aeglefinus*). Rep.Fish.Bd.Scot. 9(3):352, fig.

858. Smitt, F. A. 1882. Description d'un hareng hermaphrodite. Arch.Biol., Paris 3:259-275.

859. Souche, G. 1932. Sur une anomalie presentée par un *Ameiurus catus* Raf. Bull.Sta.biol.Arcachon 29:83-84, 2 figs.

860. _____ 1934a. Sur la coloration anormale d'un *Conger vulgaris* Cuv. Bull.Sta.biol.Arcachon 30:283.

861. _____ 1934b. Sur un "*Flesus vulgaris*" a pigmentation anormale. Bull.Sta.biol.Arcachon 30:285-288, 2 figs.

862. _____ 1935a. Sur les malformations rencontrées chez le genre *Trigla*. P.V.Soc.linn.Bordeaux 86(1):67-90.

863. _____ 1935b. Sur un poisson a oeil unique. Bull.Sta.biol. Arcachon 32(1):39-41, 2 figs.

864. _____ 1935c. Sur une anomalie constantée chez un "*Gadus luscus*" L. Bull.Sta.biol.Arcachon 32(1):43-44, 2 figs.

865. _____ 1935d. Sur un poisson monstreux. P.V.Soc.linn.Bordeaux 86(2):106-107.

866. _____ 1935e. Sur un Motelle monstreuse. P.V.Soc.linn.Bordeaux 86(2):107-108, 3 figs.

867. _____ 1935f. Sur la coloration anormale d'un *Scyllium*. P.V. Soc.linn.Bordeaux 86(2):117-118, 2 figs.

868. _____ 1935g. Sur une *Raja clavata* Rond. P.V.Soc.linn.Bordeaux 86(2):119-120.

869. _____ 1936. Sur une anomalie presentée par un *Ameiurus nebulosus* Raf. P.V.Soc.Sci.phys.nat.Bordeaux 1935:12-14, 2 figs.

870. Southwell, T. 1902. On a hermaphrodite example of the herring (*Clupea harengus*). Ann.Mag.nat.Hist. 9:195-196.

871. Sparta, A. 1930. Correlazioni e determinismo di un abnorme distacco fra due raggi consecutivi della pinna anale in *Argyroplecus hemigymnus* Cocco. Mem.Com.talassogr.ital. 172:1-22, pl.

872. _____ 1938. Monstro doppio di embrione e larva in *Zeus faber* L. Mem.Com.talassogr.ital. 257:1-5, pl.

873. Spillmann, J. 1938. Quelques cas de malformations cephaliques chez la carpe. Bull.Soc.cent.Aquic.Pêche 45(7-9):70-73, fig.

874. Ssytsch-Awerinzewa, N. 1930. Über *Pleuronectes flesus* L. des Barentsmeeres und des Weissen Meeres. Helgoländ.wiss. Meeresunters. 17(5):1-23.

875. Stach, J. 1906. Sandacze z "mopsia glowa." Okólnik Ryb. 1906: 9-12.

876. Steenstrup, J. 1863. Bidrag til en rigtigere Opfatt else af skejaevheden hos Flyderne (Pleuronectides) og til Forklaring af begge Øines Fremkomst paa samme side af Kroppen. Overs.danskVidensk.Selsk.Forh. 1863:145-194, 16 figs., pl. *also* abstr. (1864) Ann.Sci.nat. 2:253-258.

877. Steindachner, F. 1863. Über das Vorkommen monströser Kopfbildungen bei dem Karpfen. Verh.zool.-bot.Ges.Wien 13: 485-487, pl.

878. Stewart, C. 1891. On a hermaphrodite trout (*Salmo fario*); and on a hermaphrodite mackerel (*Scomber scomber*). J.Linn. Soc.(Zool.) 24:69-71.

879. Stiasny, G. 1930. Über Ambicoloration bei Plattfischen. Zool. Anz. 88:265-272, 23 figs.

880. Stockard, C. R. 1908. The question of cyclopia, one-eyed monsters. Science 28:455-456.

881. _____ 1921. Developmental rate and structural expression: an experimental study of twins, "double monsters" and single deformities and the interaction among embryonic organs during their origin and development. Amer.J. Anat. 28:117, 163-166, 173-181, 255-257.

882. Stoddart, T. T. 1836. Art of angling as practised in Scotland. 2nd.edn.,Edinburgh, iv+164 pp.

883. Stolk, A. 1955a. Plecospondylic spinal columns in the viviparous Cyprinodont, *Lebistes reticulatus* (Peters). Beaufortia 5(42): 1-9, 5 figs.

884. _____ 1955b. Dubbelmonsters bij de levendbarende tandkarpers. Het.Aquarium 26:63-66, 111-114, 13 figs.

885. _____ 1956. Plecospondylic spinal column in the eel *Anguilla anguilla*. Beaufortia 5:143-148, 3 figs.

886. Storch, O. 1897. Utersuchungen über die paarige Afterflosse der Schleierschwänze. Arb.zool.Inst.Univ.Wien 19(2):1-24.

887. Storer, D. H. 1884. Remarks on a deformed specimen of the *Platessa oblonga* Mitchill, on *Pleuronectes maculatus* Mitchill and *Orthagoriscus mola*. Proc.Boston Soc.nat.Hist. 1:194-195. 1:194-195.

888. _____ 1864. A history of the fishes of Massachusetts. Mem. Amer.Acad.Arts Sci. 8:389-434.

889. _____ 1867. A history of the fishes of Massachusetts. Cambridge and Boston, 287 pp., 39 pls.

890. Storrow, B. 1910. A case of spinal curvature in a codling. Rep. Northumb.Sea Fish.Comm. 1909-1910:37-39, figs. pl.

891. Suomalainen, E. W. 1908. (Rote Form von *Perca fluviatilis*). Medd.Soc.Fauna Fl.fenn. 34:33.

892. Supino, F. 1918. Note ittiologiche. Natura,Milano 9:143-156.

893. Surbeck, G. 1904. Ein Bachsaiblingsalbino. Allg.FishZtg. 29: 31-32.

894. _____ 1913a. Skoliose und andere pathologische Erscheinungen bei einer Nase (*Chondrostoma nasus*). Schweiz.FischZtg. 21:73-77, 2 figs.

895. _____ 1913b. Verkürzung der Wirbelsaule bei einer Forelle. Schweiz.FischZtg. 21:133.

896. Sutton A. C. 1913. On an abnormal specimen of *Roccus lineatus* with special reference to the position of the eyes. Anat. Rec. 7:195-201.

897. Suyehiro, Y. 1940. (Dropping of eye-balls in fishes). Proc.Sci. Fish.Assoc.,Tokyo 8:168-169.

898. Suzuki, Y. 1953. Notes on the abnormal barbels found in a Japanese bitterling and in a mud-loach. Collect.&Breed. 15:296, 2 figs.

899. Svärdson, G. 1949. Salmon (*Salmo salar* L.) with no adipose fin. Rep.Inst.Freshw.Res.Drottning. 29:112-114.

900. Sweet, F. H. 1921. Situs inversus viscerum in double trout. Anat.Rec. 22:183-199, 6 figs.

901. Taki, L. 1938. On the abnormal arrangement of scales and colour bands in a sole (*Zebrias*) with special reference to its adverse scales. J.Sci.Hiroshima Univ. (B-1) 6(3):23-46, 2 pls.

902. Takizaki, Y. 1953. On the accidental hermaphroditism in *Scomber japonicus*. Collect.&Breed. 15:63-64, 2 figs.

903. Tanaka, S. 1916. (An albino of *Kareius bicoloratus*). Zool.Mag. Tokyo 28:477.

904. _____ 1930. (Data for the study of fishes— 5). Zool.Mag., Tokyo 42:455-465.

905. _____ 1934. (Strange fishes and rare fishes). Kogakukai-Shuppambu, Tokyo.

906. _____ 1936. (Fishes of Japan). Dainihon Tosho K.K.,Tokyo.

907. Tandon, K. K. 1959. On a specimen of *Selaroides leptolepis* (Cuvier and Valenciennes) without the usual detached anal spines. J.Mar.biol.Ass.India 1(1):95.

908. Tarnanii, I. K. 1911. Beitrage zur Kenntnis der Fauna Turkestans auf Grund des von D.D.Pedaschenko gesammelten materials. IX. Verkrüppelte Karpfen aus dem Issyk-kul-see. Trav.Soc.Nat.,St-Pétersb. 42(1):91-99, 2 figs.

909. Taruffi, C. 1894. Storia teratologia, I-VIII. Bologna.

910. Tatarko, K. L. 1961. (Anomalies in the structure of the gill covers and fins of the carp). Vop.Ikhtiol. 1(3):412-420.

911. Tchang, S. 1934. Anomalie de l'appariel branchial chez un selachien, *Cetorhinus maximus* (Gunner), de la côte de Chine. Bull.Soc.zool.Fr. 58:423-424, fig.

912. Tchernavin, V. 1938. Two cases of malformations of the gill-covers in salmon. Proc.roy.Soc.Edinb.(B) 58:233-241, 2 figs.

913. Teichmann, H. 1957. Defekstufen von nase und auge bei fehlgebildeten larven der Regenbogenforelle (*Salmo irideus* W.Gibb.). Roux Arch.EntwMech.Org. 149:365-386.

914. Tesch, F. W. 1959. Satzzander mit Flossen-und Skelettmissbildungen. Dtsch.Fisch.-Ztg. 6(3):66-69.

915. Thienemann, A. 1922. Weitere Untersuchungen an Coregonen. Arch.Hydrobiol. 13:415-471, 4 pls.

916. Thines von, G. 1960. Untersuchungen über die Lichtempfinglichkeit von Mutanten von *Barbus* (*Puntius*) *conchonius* Hamilton-Buchanan (Cyprinidae) mit missgebildeten Augen. Z.Tierpsychol. 17(3):270-276.

917. Thirurnalacher, B. 1938. On certain double monstrosities in *Gambusia*. Proc.Indian Acad.Sci.(B) 7(6):317-322.

918. Thompson, D. H. 1928. The "Knot-head" carp of the Illinois River. Bull.Ill.nat.Hist.Surv. 17:285-320, 12 figs.

919. _____ and Adams, L. A. 1936. A race of wild carp lacking pelvic fins. Copeia 1936(4):210-215, 16 figs.

920. Thomson, J. 1873. Peculiar trout of Loch Islay. Sci.Gossip 1872:85-86, figs.

921. Thomson, W. 1865. Notes on Prof. Steenstrup's views on the obliquity of flounders. Ann.Mag.nat.Hist. 15:361-371, pl.

922. Thumann, M. E. 1953a. Ein goldgelber Aal aus der Havel. Z. Fisch. 2:321-324, pl.

923. _____ 1953b. Ein gelber Kaulbarsch aus dem Müggelsee. Z. Fisch. 2:325-326.

924. Tiedemann, D. F. 1819. Beschreibung einiger seltnen Thiermisgeburten. Missgestatteter Hecht. Monströse Karpfen. Arch.Anat.Physiol., Lpz. 5:125.

925. Tilak, R. 1961. Notes on anomalous vertebrae in *Heteropneustes fossilis* Bloch (Heteropneustidae:Siluroidea). Sci.&Cult. 27:263, 3 figs.

926. Tirelli, M. 1940. Bottoni di senso e papille sui due lati del capo di una *Solea solea* L. albina. Int.Rev.Hydrobiol. 39:537-546, 3 figs.

927. Toivonen, S. 1950. Ein Fall von Unterkopfmissbildung beim Hecht, *Esox lucius* L. Arch.Soc.zool.-bot.fenn.Vanamo 4:115-117, fig.

928. Toni de, E. 1887. Sopra un caso teratologico riscontrato nella sogliola. Boll.Soc.Veneto-Trentina Sci.nat.,Padova 4:83-84.

929. Tornier, G. 1908. Ueber experimentelles Hervorrufen und Naturentstehen von Mopsköpfen, Cyclopen und anderer vorgebürtlichen Kopfverbildungen bei Wirbeltieren. S.B. Ges.naturf.Fr.Berl. 1908:298-315, 37 figs.

930. _____ 1911. Ueber die Art, wie aussere Einflüsse den Aufbau des Tieres anändern. Verh.dtsch.zool.Ges. 1911:21-91.

931. Tortonese, E. 1939. Una singolare anomalia della pinna codale di *Nettestoma melanura* Raf.(Pesci Apodi). Boll.Mus.Zool. Anat.comp.,Torino 47:423-427, fig.

932. Traquair, R. H. 1872. On the so-called tailless trout of Islay. J.Anat.,London 6:411-416, pl.

933. _____ 1882. On specimens of "tailless" trout from Loch Enoch, Kirkcudbrightshire. Proc.R.phys.Soc.Edinb. 7:29-30.

934. _____ 1892a. Note on an abnormally developed thornback (*Raia clavata* L.). Ann.Scot.nat.Hist. 1892:29-30, fig.

935. _____ 1892b. On malformed trout from Scottish waters. Ann.Scot.nat.Hist. 1892:92-103, 3 pls.

936. _____ 1893. An unusually coloured example of the thornback (*Raia clavata* Linn.). Ann.Scot.nat.Hist. 1893:25, pl.

937. _____ 1898. On a peculiar charr from Inverness-Shire. Ann. Scot.nat.Hist. 1898:78-79.

938. _____ 1900. Ichthyological Notes III. Ann.Scot.nat.Hist. 1900: 87-90, fig., pl.

939. Travassos, H. 1954. Notas ictiologicas. VII. Sobre um characideo Teratologico (Actinopterygii; Cypriniforme). Rev. bras.Biol. 14:249-252, 4 figs.

940. Trifonowa, A. 1931. Die paarigen Ergänzungsflossen der Teleostier. Anat.Anz. 72:6-10, 2 figs.

941. Trois, E. F. 1905. Nota sopra un caso di metacromatismo nell'anguilla. Atti Ist.veneto 4:147.

942. _____ 1908a. Sopra un esemplare di *Anguilla* con spiccato metacromatismo, regalata alle collezioni dell'Instituto dal Sign. Avv. G.B.Voltolina. Atti Ist.veneto 7:65-66.

943. _____ 1908b. Nota sopra una forma di metacromatismo osservata in un esemplare di *Pleuronectes italicus* Günth. preso nelle laguna di Venezia. Atti Ist.veneto 7:221-222.

944. _____ 1909a. Sopra l'anomale colorazione della pelle osservata in un esemplare mutilato di *Lophius piscatorius* proveniente delle pescherie di Arachon. Atti Ist.veneto 8:43-45.

945. _____ 1909b. Contributo alla conoscenza di forme di metacromatismo osservate in pesci raccolti nella laguna di Venezia. Atti Ist.veneto 8:113-115.

946. Tschepurnoff, W. S. 1929. Hypochromatismus und Hyperchromatismus bei Pleuronectiden. Russk.gidrobiol.Zh. 8:129-132, 3 pls.

947. Tsuda, M. and Nakada, G. 1940. (A pug-headed individual of *Channa argus*). Zool.Mag.,Tokyo 52:253-254, fig.

948. Ubisch, L. 1951. Untersuchungen über Pleuronektiden II: Ambikoloration, Inversion und Bilateralität. Roux Arch. EntwMech.Org. 145:1-61, 36 figs.

949. _____ 1952. Untersuchungen über Pleuronektiden III. Roux Arch.EntwMech.Org. 145:528-548.

950. Umemura, J. 1955. Notes on the variation found in fishes (4). Collect.&Breed. 17:300-301, 2 figs.

951. Uzmann, J. R. and Hesselholt, M. N. 1957. Teratological hermaphroditism in the chum salmon, *Oncorhynchus keta* (Walbaum). Progr.Fish Cult. 20(4):191-192, 2 figs.

952. Vaillant, L. L. 1891. Monstruosité de la limande commune (*Pleuronectes limanda*). Bull.Soc.philom.Paris 4(2):49.

953. _____ 1908. Sur un individu monstreux nycteridoide du *Raja clavata* Linné. Bull.Mus.Hist.nat.,Paris 14:112-113.

954. Valle, A. 1931. Contributo alla teratologia dei Crostacei e dei Pesci Adriatici. Atti Mus.Stor.nat.Trieste 11(2):360-363, 6 pls.

955. Varpakhavskii, N. A. 1888. Ueber einen Fall einer überzähligen Bauchflosse beim gemeinen Wels (*Silurus glanis* L.). Anat. Anz. 3:379-381.

956. Vavra, V. 1906. Ueber einem Fall von Wirbelsäulenverkürzung bei einer Regenbogenforelle (*Salmo iridaeus* W.Gibb.). Bull. int.Acad.Prague 11:1-5, 2 pls.

957. Vladykov, V. D. 1935. A 'three-eyed" haddock (*Melanogrammus aeglefinus*) caught at St. Andrews, N. B. Canad.Fld.Nat. 49:64-67, 2 figs.

958. Vogt, C. 1882. Notice sur un hareng hermaphrodite. Arch. Biol.,Paris 3:255-258.

959. Vrolik, W. 1849. Tabulae ad illustrandum embryogenes in hominis et mammalium. Amsterdam.

960. _____ 1855. Lettre à l'occasion d'une communication de M. de Quatrefages sur la formation des monstres doubles chez les poissons. C.R.Acad.Sci.,Paris 40:970-971.

961. Waldmann, J. 1959. Über abnorm gefärbte Ostseeplattfische. Dtsch.Fisch.-Ztg. 6:268-271.

962. Walker, B. W. 1961. The ecology of the Salton Sea, California, in relation to the sportfishery. Fish Bull.,Sacramento 113:1-204, 80 figs.

963. Ward, J. W. and Gunter, G. 1962. Description of the eyes of a blind specimen of the red drum, *Sciaenops ocellata*. Copeia 1962(2):440-442.

964. Watase, S. 1887. On the caudal and anal fins of goldfishes. J. Coll.Sci.Tokyo 1:247-267, 16 figs., 3 pls.

965. Welch, E. B., Hull, M. and Katz, M. 1963. A trout with two dorsal fins. Trans.Amer.Fish.Soc. 92(1):67-68, fig.

966. White, E. I. 1950. *Pteraspis leathensis* White, a Dittonian zone-fossil. Bull.Brit.Mus.nat.Hist.(geol.). 1(3):69-89, 25 figs., pl.

967. White, J. C., Jr. 1962. A reversed ambicolorate postlarval Gulf flounder, *Paralichthys albigutta*. Copeia 1962(4):854.

968. Whitley, G. P. 1929. R. M. Johnston's memoranda relating to the fishes of Tasmania. Pap.roy.Soc.Tasm. 1928:44-68, 3 pls.

969. _____ 1937. Double-headed fishes in Australia and New Zealand. Aust.Mus.Mag. 6:154-156, 4 figs.

970. _____ 1938. The first two-headed shark in Australia. Aust. Mus.Mag. 6:432.

971. _____1940a. A trumpeter with two mouths. Aust.Mus.Mag. 7:179-180, figs.

972. _____ 1940b. The first two-headed shark in Australia. Aust. Mus.Mag. 7:216.

973. _____ 1943. Ichthyological notes and illustrations (Part 2). Aust.Zool. 10:167-187, 10 figs.

974. _____ 1944. Pugheaded fishes. Aust.Mus.Mag. 8:200-201, 2 figs.

975. _____ 1952. Some noteworthy fishes from eastern Australia. Proc.R.zool.Soc.N.S.W. 1951:27-32, 5 figs.

976. _____ 1961. Freak fishes. Aust.Mus.Mag. 13(9):298-301, 4 figs.

977. Willey, A. 1920. An apodus *Amia calva*. Proc.zool.Soc.Lond. 1920:80-89.

978. _____ and Friedman, M. H. 1930. Observations on a young *Lepidosteus* with persistent proterocercal tail-fin from the River St. Lawrence near Montreal. Trans.roy.Soc.Can.(V.) 24:121-125, 2 figs.

979. Williams, G. 1935. Note on the occurrence of a fin abnormality in the thornybacked ray (*Raia clavata*). Irish Nat.J. 5:223-225, fig., pl.

980. Williamson, H. C. 1906. On two cases of hermaphroditism in the cod (*Gadus callarias*). Rep.Fish.Bd.Scot. 24(3):290-292, 2 pls.

981. _____ 1910. Experiments to show the influence of cold in retarding development of the eggs of the herring (*Clupea harengus* L.), plaice (*Pleuronectes platessa* L.) and the haddock (*Gadus aeglefinus* L.). Rep.Fish.Bd.Scot. 1910(3):100-128, pl.

982. _____ 1911a. Report on the reproductive organs of *Sparus centrodontus* Delaroche, *Sparus cantharus* L., *Sebastes marinus* (L.) and *Sebastes dactylopterus* (Delaroche), and on the ripe eggs and larvae of *Sparus centrodontus* and *Sebastes marinus*. Rep.Fish.Bd.Scot. 1911(1):1-35, 5 pls.

983. _____ 1911b. Report on diseases and abnormalities in fishes. Rep.Fish.Bd.Scot. 1911(2):3-39, 8 pls.

984. _____ 1911c. Notes on the eggs of the angler (*Lophius piscatorius*), halibut (*Hippoglossus vulgaris*), *Conger vulgaris* and Tusk (*Brosmius brosme*); a young *Arnoglossus* sp.; abnormalities in *Lophius, Gadus, Raja:* disease in *Gadus, Pleuronectes, Zoarces;* occurence of *Himantolophus reinhardti* and *Clupea pilchardus;* the effectiveness of a seine trawl in a small pond. Rep. Fish.Bd.Scot. 1911(3):46-67, 5 pls.

985. _____ 1913. Report on diseases and abnormalities in fishes. Rep.Fish.Bd.Scot. 1913(2):1-39, 8 pls.

986. Willumsen, P. J. 1901. "Kortsnudede" torsk. Dansk.FiskForen. Medl. 10:511.

987. Windle, B. C. A. 1889. Notes on certain malformations in fishes. Proc.Bgham.nat.Hist.Soc. 6:318-321.

988. _____ 1895. On double malformations amongst fishes. Proc. zool.Soc.Lond. 1895:423-429, pl.

989. Woodward, A. S. 1888. Note on an abnormal specimen of the dentition of *Rhinoptera.* Ann.Mag.nat.Hist. 1888:281-283, fig.

990. _____ 1893. Note on a case of subdivision of the median fin in a Dipoan fish. Ann.Mag.nat.Hist. 11:241-242.

991. Woodward, H. 1908. Malformed plaice. Proc.zool.Soc.Lond. 1908:161-164, 2 figs.

992. Woolner, F. and Lyman, H. 1954. The complete book of striped bass fishing. A.S.Barnes & Co., N. Y., xii+242 pp.

993. Wu, H. W. 1932. Contribution a l'étude morphologique, biologique et systematique des poissons heterosomes de la Chine. Thesis, Paris.

994. _____ 1939. Teratological notes on some Chinese fishes. Sinensia 10:269-272.

995. Wunder, W. 1931. Erbliche Fehler beim Karpfen. Verh.dtsch. zool.Ges. 34:301-302.

996. _____ 1936. Merkwürdige Ausheilung von verletzungen beim Karpfen. Arch.EntwMech.Org. 134:551-561, 5 figs.

997. _____ 1938. Versuche über die Ausheilung von Verletzungen beim Karpfen (*Cyprinus carpio*). Arch.EntwMech.Org. 137: 540-559.

998._____ 1939. Die "Hungerform" und die "Mastform" des Karpfen (*Cyprinus carpio* L.). Z.Morph.Ökol.Tiere 35(4):594-614.

999. _____ 1947. Wirbelsäulenverkürzung beim Karpfen, eine offenbar erbliche Erscheinung. Z.Naturf.(B) 2:239-243, 9 figs.

1000. _____ 1949. Wirbelsäulenverkürzung als Rassebildendes merkmal beim Aischgründer Karpfen. Arch.EntwMech. Org. 144:1-24, 18 figs.

1001. _____ 1950. Doppelbildung der Rückenflosse der Bauchflossen und der Gallenblase nach einer Schnittverletzung beim Karpfen. Arch.EntwMech.Org. 144:358-363, 3 figs.

1002. _____ 1952. Ungewöhnliche Verletzungen bei Karpfen und ihre Verheilung. Verh.dtsch.zool.Ges. 1951:109-130, 19 figs.

1003. _____ 1956. Beeinflussing der Ausbildung der Wirbelsäule durch mechanischem Reiz beim Karpfen (*Cyprinus carpio* L.). Verh.dtsch.zool.Ges. 1955:256-274, 22 figs.

1004. _____ 1957. Ungewöhnliche Veränderungen an der Wirbelsäule des Karpfens, ihre Einwirkung auf Körperform und Wachstum der Fische. Zool.Anz 158:1-11, 8 figs.

1005. _____ 1960a. Missbildungen bei kleinen Hechten. Fischwirt 10(2):35-40.

1006. _____ 1960b. Verkümmerungserscheinungen bei Karpfenbrut. Fischwirt 10(3):71-76.

1007. Wundsch, H. H. 1913. Ein viersömmriger Karpfen mit fast vollstandigen Mundverschluss. Z.Fisch. 14:128-135, pl.

1008. Wyman, J. 1851. On two malformed cod's skulls. Proc.Boston Soc.nat.Hist. 3:178-179.

1009. Yamada, T. 1940. On the malformation of *Plecoglossus altivelis* T.&S. from the Yoichi River, Hokkaido. Bull.Jap.Soc. sci.Fish. 8:355-356, fig.

1010. Yamagouchi, M. 1955. (Anomalies found in *Paralichthys olivaceous* and *Platichthys stellatus*). Collect.&Breed. 17:244.

1011. _____ 1956. (On an ambicolorate *Paralichthys olivaceous*). Rep. Akita Pref.Fish.exper.Sta. 1954:93-94.

1012. Yanada, T., Watanabe, H., Kobayashi, H. and Umemura, J. 1958. Notes on the variation found in fishes (5). Collect.&Breed. 20:375-377, 3 figs.

1013. Yarrell, W. 1841. A history of British fishes. 2nd.edn., London, 2 vols.

1014. Ying-Tien, W. and Min-Hsin, L. 1957. Observations on abnormal brains in the dogfish, *Mustelus manzo* Bleeker. Acta zool.sin. 9(4):277-281.

1015. Yung, E. J. J. 1901. Note sur un cas de monstruosité de la tête chez une truite. Rev.suisse Zool. 9:307-313, 315-323, pl.

1016. _____ 1914. Deux cas tératologiques. Arch.Sci.phys.nat. Geneve 37(4):76-77.

1017. Zanandrea, G. 1953. Note sulla ecologia e distribuzione in Italia della Lampredo di ruscello (*Lampetra planeri* Bloch). Boll. Pesca Piscic.Idrobiol. 8:252-269.

1018. Zirpolo, G. 1942. Xantocroismo e metacromatismo in *Hippocampus guttulatus*. Boll.Soc.Nat.Napoli 52:11-19, 2 figs.

1019. Zschiesche, A. 1910. Eizellen in der Haut von Macropoden. Zool.Anz. 36:294-298.

1020. Zur Mühlen, M. 1911. Ein Wels-albino. Allg.FischZtg. 26:517-518.

Addenda

A1. Anthony, R. and Salmon, J. 1901. La pygomélie, son interprétation, sa place dans la classification tératologique, ses differents degrés. C.R.Soc.Biol.,Paris 53:135-136.

A2. Akasaki, M. 1963. (A pug-headed *Evynnis japonica*). Collect.& Breed. 25(5):26-27, 2 figs.

A3. Hikita, T. 1954. An aberrant form of the dog-salmon with abnormal scales. Jap.J.Ichthyol. 4:133-135, 4 figs.

A4. _____ 1958. Some examples of hermaphroditic gonad found in a Alaska pollack, *Theragra chalcogramma* (Pallas). Jap. J.Ichthyol. 7:77-81, 2 figs.

A5. Jackson, R. G. 1953. Trout with two dorsal fins. Fish.Gaz.,Lond. 135:1062.

A6. Kurata, Y. 1963. (Anomalies in marine fishes). Collect.&Breed. 25(5):43, 2 figs.

A7. Miclea, C. 1948. Anomalié dans la morphologie et dans la structure des lamelles branchiales chez *Crenilabrus ocillatus.* Bul.Soc.Sti.Cluj. 9:573-577, 3 figs.

A8. Schreiter, T. 1959. Eine aussergewöhnliche Wirbelsäulenverkrüppelung bei einem Karpfen. Dtsch.Fisch.-Ztg. 6:244-246.

A9. Ubisch, L. 1950. Om abnorm fargete og inverse flatfisk. Naturen.

A10. Aubry, P. V. 1960. Anomalias entre los peces. Puntal 7(75): 14-15.

A11. Chabanaud, P. 1958. Étude d'une sole affectée d'une anomalie pigmentaire apparemment consécutive à un traumatisme. Bull.Soc.zool.Fr. 82:326-330.

A12. Gard, R. 1960. The survival of a brook trout with two mutilated gill arches. Progr.Fish. Cult. 22(3):108.

A13. Moe, M. A., Jr. 1963. Partial albinism in a xanthic specimen of *Epinephelus morio* (Valenciennes) from the Gulf of Mexico. Copeia 1963(4):703.

A14. French, R. R. 1960. Rainbow trouts, *Salmo gairdneri*, with anomalous caudal and pelvic fins. Copeia 1960(3):247-248, fig.

A15. Ramamohana Rao, V. 1963. A note on a hermaphroditic gonad in the Indian mackerel *Rastrelliger canagurta* (Curvier). J.Mar.biol.Ass.India 4(1-2):241-243.

A16. Steffens, W. 1961. Flossenschadingungen beim Hecht (*Esox lucius*). Biol.Zbl. 80(1):79-84.

A17. Wunder, W. 1961. Massenhaftes Auftreten von Missbildungen bei kleinen Hechten (*Esox lucius* L.). Zool.Anz. 166(1-2): 42-55.

Taxonomic Index

Index of Anomalies

Index of Sources and Abbreviations

Abh. naturh. Ges. Nürnberg	Abhandlungen der Naturhistorischen. Gesellshaft zu Nürnberg.
Acta Soc. Fauna Flora fenn.	Acta Societatis pro Fauna et Flora Fennica, Helsinki.
Acta Soc. Linn., Bordeaux	Actes, Société Linnéenne de Bordeaux, Bordeaux.
Acta zool. sin.	Acta Zoologica Sinica. Peking.
Akvarist. Listy	Akvaristicke Listy. Praha.
Allatt Kozlem.	Alattani Kozlemenyek Budapest.
Allg. FischZtg.	Allgemeine Fischereizeitung. München.
Amer. J. Anat.	American Journal of Anatomy. Baltimore.
Amer. J. Sci.	American Journal of Science. New Haven.
Amer. Mus. Novit.	American Museum Novitates. New York.
Amer. Nat.	American Naturalist. Tempe, Ariz.
Anal. Inst. Cerc. pisc. Român.	Analele Institutului de cercetări Piscicole al României. Bucharest.
Anat. Anz.	Anatomischer Anzeiger. Jena.
Anat. Rec.	Anatomical Record. Philadelphia.
Anim. Kingd.	Animal Kingdom. New York.
Ann. Hist. nat.	Annales d'historie naturelle. Paris.
Ann. Mag. nat. Hist.	Annals and Magazine of Natural History. London.
Ann. Paléont.	Annales de paléontologie. Paris.
Ann. Rep. Fish. Bd. Scot.	Annual Report of the Fishery Board for Scotland. Edinburgh.

Ann. S. Afr. Mus.	Annals of the South African Museum. Cape Town.
Ann. Sci. nat.	Annales des Sciences Naturelles. Paris.
Ann. Scot. nat. Hist.	Annals of Scottish Natural History. Edinburgh.
Annot. zool. jap.	Annotationes Zoologicas Japonenses. Tokyo.
Annu. Mus. zool. Acad. St-Pétersb.	Annales du Musée zoologique. Acad. imp. des sciences. St-Pétersbourg.
Annu. Rep. Smithson. Instn.	Annual Report, Smithsonian Institution. Washington, D. C.
Annu. Soc. paléont. russe	Annuaire de la Société paléontologique de Russie.
Aquar., Berlin	Aquarium, Berlin.
Aquar.-u. Terrar. Z.	Aquarien-und Terrarien-Zeitschrift. Stuttgart.
Aquarium J.	Aquarium Journal. San Francisco.
Aquarium, Philad.	Aquarium. Philadelphia.
Arb. anat. Inst., Wiesbaden	Arbeiten aus anatomischen Instituten. Wiesbaden.
Arb. ung. biol. ForschInst.	Arbeiten des Ungarischen biologischen Forschungs-Institutes. Tihany.
Arb. zool. Inst. Univ. Wien	Arbeiten aus den Zoologischen Instituten der Univ. Wien.
Arch. Anat. Physiol., Lpz.	Archiv für Anatomie u. Physiologie. Leipzig.
Arch. Biol., Paris	Archives de biologie. Paris.
Arch. EntwMech. Org.	Archiv für Entwicklungsmechanik der Organismen. Leipzig.
Arch. ges. Physiol.	Archiv. für die Gesammte Physiologie. Leipzig.
Arch. Hydrob. Rybact.	Archiwum hydrobiologji i rybactiva. Suwalki. (Arch. Hydrobiol. Ichthyol.).

Arch. Hydrobiol.	Archiv für Hydrobiologie. Stuttgart.
Arch. Mus. Hist. nat. Lyon	Archives du Muséum d'histoire naturelle de Lyon. Lyon.
Arch. Mus. Hist. nat. Paris	Archives du Muséum d'histoire naturelle. Paris.
Arch. Naturgesch.	Archiv für Naturgeschichte. Berlin.
Arch. Sci. phys. nat.	Archives des sciences physiques et naturelles. Geneve.
Arch. Soc. biol. Montevideo	Archivos de la Sociedad de biologia de Montevideo.
Arch. Soc. zool.-bot. fenn. Vanamo	Archivum Societatis Zoologicae-Botanicae Fennicae 'Vanamo.' Helsinki.
Arch. Ver. Naturg. Mecklenb.	Archiv des Vereins der Freunde der Naturgeschichte in Mecklenburg. Güstrow.
Arch. zool. ital.	Archivio Zoologico Italiano. Torino.
Atti Congr. Nat. ital.	Atti del Congresso dei naturalisti italiani. Milano.
Atti Ist. veneto	Atti dell'Istituto Veneto di Scienze, Lettere ed Arti. Venezia.
Atti Mus. Stor. nat. Trieste	Atti del Museo Civico di Storia Naturale di Trieste. Trieste.
Atti Soc. ital Sci. nat.	Atti della Società italiana di scienze naturali e del Museo civile de storia naturale. Milan.
Atti Soc. ligust. Sci. nat. geor.	Atti della Società ligustica di scienze naturali e geografiche. Genova.
Aust. Mus. Mag.	Australian Museum Magazine. Sydney.
Aust. Zool.	Australian Zoologist. Royal Zoological Society of New South Wales. Sydney.
Balkan-Kutat. Tud. Eredm.	Balkan-Kutatásainak Tudományos Eredményei. Budapest.

Beaufortia	Beaufortia (Zoological Museum). Amsterdam.
Berl. klin. Wschr.	Berliner klinische Wochenschrift. Berlin.
Bih. svensk. VetenskAkad. Handl.	Bihang till Kgl.Svenska Vetenskapsakademiens Handlingar. Stockholm.
Bijdr. Dierk.	Bijdragen tot der Dierkunde. Amsterdam.
Biol. Bull., Woods Hole	Biological Bulletin. Marine Biological Laboratory. Woods Hole.
Biol. Res. Fish. Exp. "ENDEAVOUR"	Biological Results of the Fishing Experiments carried out by F.I.S. "ENDEAVOUR, 1909-14. Melbourne.
Biol. Zbl.	Biologisches Zentralblatt. Leipzig.
Bl. Aquar.-u. Terrarienk.	Blätter für Aquarien-und Terrarienkunde. Stuttgart.
Bol. Inst. oceanogr., S. Paulo	Boletim do Instituto Oceanográphico. São Paulo.
Bol. Pescas, Madr.	Boletin de pescas. (Instituto español de oceanografia). Madrid.
Bol. Soc. esp. Hist. Nat.	Boletin de la Sociedad Española de Historia Natural. Madrid.
Boll. Mus. Zool. comp., Genoa	Bollettino dei Musei di Zoologia e di Anatomia Comparata della R. Universita. Genoa.
Boll. Mus. Zool. Anat. comp., Torino	Bollettino dei Musei di Zoologia e di Anatomia Comparata dell 'Universita.' Torino.
Boll. Nat., Siena	Bollettino del naturalista. Siena.
Boll. Pesca Piscic. Idrobiol.	Bollettino di Pesca, di Piscicoltura e di Idrobiologia. Roma.
Boll. Soc. lombarda Pesca	Bollettino della Società lombarda per la pesca e l'Aquicoltura. Milan.
Boll. Soc. Nat. Napoli	Bollettino della Società dei Naturalisti in Napoli. Naples.

Boll. Soc. zool. ital.	Bollettino della Società zoologica italiana. Rome.
Bot. & Zool., Tokyo	Botany and Zoology, Theoretical and Applied. Tokyo.
Brit. med. J.	British Medical Journal. London.
Bul. Inst. Cerc. pisc.	Buletinul Institutului de Cercetări Piscicole. Bucharest.
Bul. Soc. Nat. Român	Buletinul Societătii Naturalistiler din România. Bucharest.
Bull. Soc. roum. Sci.	Buletinul Societătii de Stiinte din Bucuresti. Bucharest.
Bul. Soc. Sti. Cluj	Buletinul Societătii de Stiinte din Cluj. Cluj.
Bull. Acad. Sci., Leningrad	Bulletin of the Academy of Sciences. Leningrad.
Bull. Acad. Sci., Petrograd	Bulletin of the Academy of Sciences. Petrograd.
Bull. Acad. Sci., St-Pétersb.	Bulletin of the Academy of Sciences. St-Pétersburg.
Bull. Amer. Mus. nat. Hist.	Bulletin of the American Museum of Natural History. New York.
Bull. biol.	Bulletin Biologique de la France et de la Belgique. Paris.
Bull. Brit. Mus. (nat. Hist. zool.)	Bulletin of the British Museum (Natural History zoology). London.
Bull. Fla. St. Mus. biol. Sci.	Bulletin of the Florida State Museum. Biological Sciences. Gainesville.
Bull. Ill. nat. Hist. Surv.	Bulletin of the Illinois Natural History Survey. Urbana.
Bull. Inst. océanogr. Monaco	Bulletin de l'Institut Océanographique. Monaco.
Bull. int. Acad. Prague	Bulletin international. (Académie des sciences de l'Empereur Francois Joseph I - Academie tchèque des sciences.) Prague.

Bull. Japan Sea Fish. Res. Lab.	Bulletin of the Japan Sea Regional Fisheries Research Laboratory. Niigata.
Bull. Jap. Soc. sci. Fish.	Bulletin of the Japanese Society of Scientific Fisheries. Tokyo.
Bull. Mar. Sci. Gulf Caribb.	Bulletin of Marine Science of the Gulf and Caribbean. Coral Gables, Fla.
Bull. Mus. Hist. nat., Paris	Bulletin du Muséum National d'Histoire Naturelle. Paris.
Bull. Mus. océanogr. Monaco	Bulletin Musée Océanographique de Monaco. Monaco.
Bull. N. C. geol. econ. Surv.	Bulletin of the North Carolina Geological and Economic Survey. Chapel Hill.
Bull. N. Y. zool. Soc.	Bulletin of the New York Zoological Society. New York.
Bull. Sci. Fr. Belg.	Bulletin Scientifique de la France et de la Belgique. Paris.
Bull. Soc. Acclim., Biarritz	Bulletin de la Société d'acclimatation du golfe de Gascogne. Biarritz.
Bull. Soc. Aquic. Pêche	Bulletin de la Société d'Aquiculture et de Pêche. Paris.
Bull. Soc. cent. Aquic. Pêche	Bulletin de la Société centrale d'Aquiculture et de Pêche. Paris.
Bull. Soc. Hist. nat. Toulouse	Bulletin de la Société d'Histoire Naturelle de Toulouse.
Bull. Soc. linn. Normandie	Bulletin de la Société linnéenne de Normandie. Caen.
Bull. Soc. linn. Seine-Marit.	Bulletin de la Société linnéenne de la Seine-Maritime. Le Havre.
Bull. Soc. Nat. Moscou	Bulletin de la Société des naturalistes de Moscou.
Bull. Soc. neuchâtel. Sci. nat.	Bulletin de la Société neuchâteloise des sciences naturelles. Neuchâtel.
Bull. Soc. philom. Paris	Bulletin de la Société Philomantique de Paris.

Bull. Soc. portug. Sci. nat.	Bulletin de la Société portugaise des Sciences naturelles. Lisbonne.
Bull. Soc. Sci. Bretagne	Bulletin de la Société Scientifique de Bretagne. Rennes.
Bull. Soc. sci. méd. Ouest	Bulletin de la Société scientifique et médicale de l'Ouest. Rennes.
Bull. Soc. Sci. nat. Maroc	Bulletin de la Société des Sciences Naturelles et Physiques du Maroc. Rabat.
Bull. Soc. Sci. nat. Ouest	Bulletin de la Société des Sciences Naturelles de l'Ouest de la France. Nantes.
Bull. Soc. Sci. nat. Rouen	Bulletin de la Société des amis des Sciences Naturelles de Rouen. Rouen.
Bull. Soc. Sci. nat. Tunis	Bulletin de la Société des Sciences Naturelles de Tunisie. Tunis.
Bull. Soc. Sci. nat méd. Seine-et-Oise	Bulletin de la Société des Sciences Naturelles et Médicales de Seine-et-Oise. Versailles.
Bull. Soc. roy. Zool., Anvers	Bulletin de la Société Royale de Zoologie. Anvers.
Bull. Soc. vaud. Sci. nat.	Bulletin de la Société vaudoise des sciences naturelles. Lausanne.
Bull. Soc. zool. Fr.	Bulletin de la Société Zoologique de France. Paris.
Bull. Sta. biol. Arcachon	Bulletin de la station Biologique d'Arcachon. Bordeaux.
Bull. Sta. océanogr. Salambô	Bulletin. Station Océanographique de Salambô. Tunisia.
Bull. U.S. Fish. Comm.	Bulletin of the United States Fish Commission. Washington.
Butll. Inst. catal. Hist. nat.	Butlleti de la Institució catalana d'historia natural. Barcelona.
Calif. Fish Game	California Fish and Game. Sacramento.

Canad. Fld. Nat.	Canadian Field Naturalist. Ottawa.
Canad. J. Res.	Canadian Journal of Research. Ottawa.
Canad. J. Zool.	Canadian Journal of Zoology. Ottawa.
Ceylon J. Sci.(B)	Ceylon Journal of Science (Biological Sciences). Colombo.
Chesapeake Sci.	Chesapeake Science. Solomons, Md.
China J.	China Journal. Shanghai.
Chosen no Suisan	Chosen no Suisan, Pusan.
Circ. Coop. Invest. Fish. Japan Sea, Niigata	Nihon Kaiku Suisan Shiken Kenkyu Renraku Nyusu, Niigata.
Collect. & Breed.	Collecting and Breeding. Tokyo.
Contr. Canad. biol.	Contributions to Canadian Biology. Ottawa.
Contr. Md. Dep. Res. Ed.	Contribution Maryland Department of Research and Education. Solomons, Md.
Copeia	Copeia (The American Society of Ichthyologists and Herpetologists). Philadelphia.
C. R. Acad. Sci., Paris	Compte Rendu Hebdomadaire des Séances de l'Académie des Sciences. Paris.
C. R. Ass. Anat.	Compte Rendu de l'Association des anatomistes. Paris and Nancy.
C. R. Ass. avanc. Sci. Fr.	Compte Rendu de la Session Association Francaise pour l'Avancement des Sciences. Paris.
C. R. Soc. Biol., Paris	Compte Rendu Hebdomadaire des Séances et Mémoires de la Société de Biologie. Paris.
Curr. Sci.	Current Science. Bangalore.
Dansk. FishForen. Medl.	Dansk Fiskeriforenings Medlemsblad. Copenhagen.

Denkschr. Akad. Wiss., Wien	Denkschriften der Kaiserlichen Akademie der Wissenschaften. Wien.
Dokl. Akad. Nauk SSSR	Doklady Akademii Nauk SSSR. Moscow.
Doriana	Doriana. Genoa.
Dtsch.Fisch.-Korresp.	Deutsche Fischerei - Korrespondenz. Cöln.
Dtsch. Fisch.-Ztg.	Deutsche Fischerei-Zeitung. Berlin-Friedrichshaven.
Ecology	Ecology. Durham, N. C.
Ergebn. allg. Path. path. Anat.	Ergebnisse der allgemeinen Pathologie u. patholog. Anatomie d. Menschen u.d.Tiere. Wiesbaden.
Experientia	Experientia. Revue Mensuelle des Sciences Pures et Appliquées. Basel.
Fauna & Flora, Pretoria	Fauna and Flora (Transvaal Provincial Administration). Pretoria.
Fischereztg. Neudamm	Fischereizeitung. Neudamm.
Fiskeridir. Skr. Havundersøk	Fiskeridirektoratets Skrifter. Serie Havundersøkelser. Bergen.
Fisktdskr. Finl.	Fiskeritidskrift för Finland. Helsingfors.
Fischwirt	Fischwirt. Hamburg.
Fish Bull., Sacramento	Fish Bulletin (California Department of Fish and Game). Sacramento.
Fish. Bull., U.S.	Fishery Bulletin, U. S. Fish and Wildlife Service. Washington, D. C.
Fish. Gaz., London	Fishing Gazette. London
Folia zool. hydrobiol., Riga	Folia Zoologica et Hydrobiologica. Riga.
For. & Str.	Forest and Stream. New York.
Gewäss. u. Abwäss.	Gewässer und Abwässer. Düsseldorf.

Helgoländ. wiss. Meeresunters.	Helgoländer Wissenschaftliche Meeresuntersuchungen. Stuttgart.
Heredity	Heredity. London.
Hokusuishi Jumpo	Hokusuishi Jumpo, Yoichi.
Int. Congr. Zool., Monaco	International Congress of Zoology. Monaco.
Int. Rev. Hydrobiol.	Internationale Revue der gesamten Hydrobiologie. Berlin.
Invest. Rep. U.S. Bur. Fish.	Investigational Report. U.S. Bureau of Fisheries. Washington, D. C.
Irish Nat. J.	Irish Naturalists' Journal. Belfast.
J. Anat., London	Journal of Anatomy (and Physiology). London.
J. Anat., Paris	Journal de l'anatomie et de la physiologie normales et pathologiques de l'homme et des animaux. Paris.
J. Asiat. Soc. Beng.	Journal of the Asiatic Society of Bengal. Calcutta.
J. Bombay nat. Hist. Soc.	Journal of the Bombay Natural History Society. Bombay.
J. Coll. Agric., Tokyo	Journal of the College of Agriculture, Imperial University of Tokyo. Tokyo.
J. Coll. Sci. Tokyo	Journal of the College of Science, Imperial University of Tokyo. Tokyo.
J. Cons.	Journal du Conseil. Copenhagen.
J. Elisha Mitchell sci. Soc.	Journal of the Elisha Mitchell Scientific Society. Chapel Hill, N. C.
J. exp. Zool.	Journal of Experimental Zoology. Philadelphia.
J. Fac. Sci. Hokkaido	Journal of the Faculty of Science. Hokkaido University. Hokkaido.

J. Fac. Sci. Univ. Tokyo	Journal of the Faculty of Science. University of Tokyo. Tokyo.
J. Fish. Res. Bd. Can.	Journal of the Fisheries Research Board of Canada. Ottawa.
J. Hered.	Journal of Heredity. Baltimore.
J. Linn. Soc. (Zool.)	Journal of the Linnean Society (Zoology). London.
J. Mar. biol. Ass. India	Journal of the Marine Biological Association of India. Mandapam Camp.
J. Mar. biol. Ass. U.K.	Journal of the Marine Biological Association of the United Kingdom. Plymouth.
J. Morph.	Journal of Morphology. Philadelphia.
J. Path. Bact.	Journal of Pathology and Bacteriology. London.
J. R. micr. Soc.	Journal of the Royal Microscopical Society. London.
J. Sci. Hiroshima Univ.	Journal of Science of the Hiroshima University. Hiroshima.
J. Tenn. Acad. Sci.	Journal of the Tennessee Academy of Science. Nashville.
J. Univ. Bombay	Journal of the University of Bombay. Fort Bombay.
J. zool. Soc. India	Journal of the Zoological Society of India. Calcutta.
Jap. J. Ichthyol.	Japanese Journal of Ichthyology. Tokyo.
Jber. Ver. naturk. Mannheim	Jahresbericht des vereins für Naturkunde in Mannheim.
Jh. Ver. vaterl. Naturk. Württemb.	Jahresheft des Vereins für Väterländische Naturkunde in Württemberg. Stuttgart.
Kagaku	Kagaku, Tokyo.
Kieler Meeresforsch	Kieler Meeresforschungen. Kiel.

K. norske vidensk. Selsk. Forh.	Kongelige Norske Videnskabernes Selskabs Forhandlinger. Trondheim.
KorrespBl. NaturfVer. Riga	Korrespondenzblatt des Naturforschervereins zu Riga.
Kosmos, Lwów	Kosmos. Czasopismo Polskiego Towarzystwa przyrodników imienia Kopernika. Lwów.
Maryland Nat.	Maryland Naturalist. Baltimore.
Math.-fys. Medd.	Mathematisk-fysiske Meddelelser. Kgl. Danske Videnskabernes Selskab. Copenhagen.
Medd. Soc. Fauna Fl. Fenn.	Meddelanden af Societas pro Fauna et Flora Fennica. Helsingfors.
Mém. Acad. Sci. St-Pétersb.	Mémoires de l'Academie Imperial des sciences de St-Pétersbourg.
Mem. Amer. Acad. Arts. Sci.	Memoirs of the American Academy of Arts and Sciences. Boston.
Mem. Com. talassogr. ital.	Memorie del Comitato Talassografico Italiano. Venezia.
Mem. R. Accad. Bologna	Memorie della R. Accademie delle scienze dell' Istitute di Bologna. Bologna.
Mem. R. Ist. veneto	Memorie del R. Istituto veneto di scienze, lettere ed arti. Venezia.
Mém. Soc. linn. Normandie	Mémoires de la Société linnéenne de Normandie. Caen.
Mem. Soc. zool. tchécosl.	Vestnik Ceskoslovenské Zoologické Spolecnosti. Prague.
Memor. Soc. Fauna Fl. fenn.	Memoranda Societatis pro Fauna et Flora Fennica. Helsinki.
Misc. Publ. Mus. Zool. Univ. Mich.	Miscellaneous Publications of the Museum of Zoology, University of Michigan.
Mitt. hamburg. zool. Mus.	Mitteilungen aus den Hamburgischen Zoologischen Museum und Institut. Hamburg.

Mitt. Mus. Naturk. Magdeb.	Mitteilungen aus dem Museum für Naturkunde und Vergeschichte und dem naturwissenschaftlichen Arbeitkreis. Magdeburg.
Mitt. westpreuss. FischVer.	Mitteilungen des Westpreussischen Fischereivereins. Danzig.
Mitt. zool. Sta. Neapel	Mitteilungen aus der Zoologischen Station zu Neapel. Berlin.
Mon. Publ. Shimane Pref. Fish. Exp. Sta.	Shimane Suishi Geppo, Hamada.
Monit. zool. ital.	Monitore Zoologico Italiano. Firenze.
Morph. Jb.	Morphologisches Jahrbuch. Leipzig.
N.Z.J. Sci. Tech.	New Zealand Journal of Science and Technology. Wellington.
Nachr. naturw. Mus. Aschaffenburg	Nachrichten des Naturwissenschaftlichen Museums der Stadt Aschaffenburg.
Nasha Okh.	Nasha Okhota. Petrograd.
Nat. Hist. Mag.	Natural History Magazine. British Museum. London.
Nat. Hist., N. Y.	Natural History. New York.
Nat. malgache	Naturaliste Malgache. Tananarive.
Natur. u. Volk	Natur und Volk. Senckenbergische Naturforschende Gesellschaft. Frankfurt.
Natura, Milano	Natura. Milano.
Nature, Lond.	Nature. London.
Nature Mag.	Nature Magazine. Baltimore.
Nature, Paris	Nature. Paris.
Naturen	Naturen. Bergen.
Natuurk. Tijdschr. Ned.-Ind.	Natuurkundig tijdschrift voor Nederlandsch-Indie. Batavia.

Neptunia	Neptunia. Revue de l'Association des Amis du Musee de la Marine. Paris.
Nerthus	Nerthus. Wochenschrift für Pflanzen und Blumenfreunde. Altona.
Nihon Gakujutsu Kyokai Hokoku	Nihon Gakujutsu Kyokai Hokoku, Tokyo.
Notes Inst. océanogr. Split	Notes. Institute of Oceanography and Fisheries. Split.
Notes Leyden Mus.	Notes, Leden Museum. Leyden.
Nova Acta Leop. Carol	Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae naturae curiosorum. Halle.
Ofvers. finska VetenskSoc. Förh.	Ofversigt af Finska Vetenskapssocietetens Förhandlingar. Helsingfors.
Okólnik Ryb.	Okólnik Rybacki. Organ Krajowego Towarzystwa Rybackiego w Krakowie.
Öst. FischZtg.	Österreichische Fischereizeitung. Wien.
Overs. dansk Vidensk. Selsk.	Oversigt over det Kgl. Danske Videnskabernes Selskabs Förhandlinger. Copenhagen.
Pacific Discov.	Pacific Discovery. Berkeley, Calif.
Paläont. Z.	Paläontologische Zeitschrift. Berlin.
Pap. Mich. Acad. Sci.	Papers from the Michigan Academy of Science, Arts and Letters. Ann Arbor.
Pap. roy. Soc. Tasm.	Papers and Proceedings of the Royal Society of Tasmania. Hobart.
Peking nat. Hist. Bull.	Peking Natural History Bulletin, Yen-Ching University. Peking.
Phil. Trans.(B)	Philosophical Transactions of the Royal Society. Series B. Biological Sciences. London.

Physiol. Zoöl.	Physiological Zoölogy. Chicago.
Proc. Acad. nat. Sci. Philad.	Proceedings of the Academy of Natural Sciences of Philadelphia.
Proc. Bghm. nat. Hist. Soc.	Proceedings of the Birmingham Natural History and Philosophical Society. Birmingham.
Proc. Boston Soc. nat. Hist.	Proceedings of the Boston Society of Natural History. Boston.
Proc. Camb. phil. Soc.	Proceedings of the Cambridge Philosophical Society. Cambridge.
Proc. Ind. Acad. Sci.	Proceedings of the Indiana Academy of Sciences. Brookville.
Proc. Indian Acad. Sci.(B)	Proceedings of the Indian Academy of Sciences. Series B. Biological Sciences. Bangalore.
Proc. Iowa Acad. Sci.	Proceedings of the Iowa Academy of Science. Des Moines.
Proc. La. Acad. Sci.	Proceedings of the Louisiana Academy of Sciences. Baton Rouge.
Proc. Linn. Soc. London.	Proceedings of the Linnean Society. London.
Proc. Linn. Soc. N.S.W.	Proceedings of the Linnean Society of New South Wales. Sydney.
Proc. Lpool. biol. Soc.	Proceedings and Transactions of the Liverpool Biological Society. Liverpool.
Proc. nat. Inst. Sci. India	Proceedings of the National Institute of Sciences of India. Calcutta.
Proc. Pan-Pacific sci. Congr., Tokyo	Proceedings of the Pan-Pacific Science Congress. Tokyo.
Proc. R. phys. Soc. Edinb.	Proceedings of the Royal Physical Society of Edinburgh.
Proc. R. Soc. Med.	Proceedings of the Royal Society of Medicine. London.

Proc. R. zool. Soc. N.S.W.	Proceedings of the Royal Zoological Society of New South Wales. Sydney.
Proc. roy. Soc. (B)	Proceedings of the Royal Society. Series B. Biological Sciences. London.
Proc. roy. Soc. Edinb.(B)	Proceedings of the Royal Society of Edinburgh. Section B.-Biology.
Proc. U.S. nat. Mus.	Proceedings of the United States National Museum. Washington, D. C.
Proc. zool. Soc. Lond.	Proceedings of the Zoological Society of London.
Progr. Fish Cult.	Progressive Fish Culturist. Washington, D. C.
Publ. Inst. Biol. apl. Barcelona	Publicaciones del Institute de Biologiá Aplicada. Barcelona.
Publ. Inst. Mar. Sci. Univ. Texas	Publications of the Institute of Marine Science. University of Texas. Port Aransas, Texas.
Puntal	Puntal. Revista Maritima y Pesquera. Alicante.
P. V. Soc. linn. Bordeaux	Procès-verbaux de la Société linnéenne de Bordeaux.
P. V. Soc. Sci. phys. nat. Bordeaux	Procès-verbaux des séances de la Société des sciences physiques et naturelles de Bordeaux.
R. C. Accad. Napoli	Rendiconti della R. Accademia delle Scienze Fisiche e Matematiche. Naples.
R. C. Ist. lombardo	Rendiconti dell' Istitute lombardo di scienze e lettere. Milano.
Rapp. Cons. Explor. Mer.	Rapport et Procès-verbaux des Réunions. Conseil Permanent International pour l'Exploration de la Mer. Charlottenlund.
Rec. Indian Mus.	Records of the Indian Museum. Calcutta.
Rep. Akita Pref. Fish. Exper. Sta.	Akita-Ken Suisan Shikenjo Jigyo Hokoku-Sho, Funakawa.

Rep. Brit. Ass.	Report of the British Association for the Advancement of Science. London.
Rep. Fish. Bd. Scot.	Report of the Fishery Board for Scotland. Edinburgh.
Rep. Fish. Can.	Report of the Fisheries Branch, Department of Marine and Fisheries, Canada. Ottawa.
Rep. Fish. Mar. biol. Surv. S. Afr.	Report of the Fisheries and Marine Biological Survey, Republic of South Africa. Pretoria.
Rep. For. Comm. N.Y.	Report of the Forest, Fish and Game Commissioner, New York State. Albany.
Rep. Inst. Freshw. Res. Drottning.	Report of the Institute of Freshwater Research, Fishery Board of Sweden. Drottningholm.
Rep. Lancs. Sea-Fish. Lab.	Report of the Lancashire Sea-Fisheries Laboratories. Liverpool.
Rep. Northumb. Sea Fish. Comm.	Report of the Scientific Investigations. (Northumberland Sea Fisheries Committee). Newcastle-upon-Tyne.
Rep. Plymouth Instn.	Report and Transactions of the Plymouth Institution and Devon and Cornwall Natural History Society. Plymouth.
Rep. prov. Mus. nat. Hist. B.C.	Report. Provincial Museum of Natural History and Anthropology, British Columbia. Victoria.
Rep. U.S. Comm. Fish.	Report of the United States Commissioner of Fisheries. Washington, D. C.
Rev. bras. Biol.	Revista Brasileira de Biologia. Rio de Janeiro.
Rev. Fac. Ciênc. Lisboa (C)	Revista da Faculdade de Ciências. Universidade de Lisboa. Serie C.-Ciências Naturais. Lisbon.
Rev. suisse Zool.	Revue Suisse de Zoologie. Annales de la Société Zoologique Suisse et du Muséum d'Histoire Naturelle de Geneve. Geneva.

Riv. Biol. gen.	Rivista di biologia generale. Torino.
Riv. ital. Sci. nat.	Rivista Italiana di Scienze Naturali. Siena.
Riv. mens. Pesca	Rivista mensile di pesca e idrobiologia. Como.
Roux Arch. EntwMech. Org.	Wilhelm Roux Archiv für Entwicklungsmechanik der Organismen. Berlin.
Russk. gidrobiol. Zh.	Russische hydrobiologische Zeitschrift. Saratov.
Salm. Fish.	Salmon Fisheries. Fishery Board for Scotland. Edinburgh.
S. B. Akad. Wiss. Wien	Sitzungsberichte der Akademie der Wissenschaften in Wien.
S. B. dtsch. Akad. Wiss.	Sitzungsberichte der Deutschen Akademie der Wissenschaften zu Berlin.
S. B. Ges. ges. Naturw. Marburg	Sitzungsberichte der Gesellschaft zur Beförderung der Gesamten Naturwissenschaften zur Marburg.
S. B. Ges. Morph. Physiol. Münch.	Sitzungsberichte der Gesellschaft für Morphologie und Physiologie in München.
S. B. Ges. naturf. Fr. Berl.	Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin.
S. B. 'Lotos'	Sitzungsberichte des Deutschen Naturwissenschaftlich - medizinischen Vereins für Böhmen 'Lotos' in Prag. Prague.
S. B. naturf. Ges. Lpz.	Sitzungsberichte der Naturforschenden Gesellschaft zu Leipzig.
Sborn. Rab. Ikhtiol. Gidrobiol.	Sbornik Rabot na Ikhtiologii i Gidrobioligii.
Schweiz. FischZtg.	Schweizerische Fischereizeitung. Phäffikon.
Sci. & Cult.	Science and Culture. Calcutta.
Sci. Gossip	Science Gossip. London.
Sci. Mon., N.Y.	Scientific Monthly. New York.
Sci. Obsr., Boston	Science Observer. Boston.

Sci. Rep. Hokkaido Salm. Hatch.	Scientific Reports of the Hokkaido Salmon Hatchery. Nakanoshima.
Sci. Rep. nat. Tsing Hua Univ.	Science Reports of the National Tsing Hua University. Peiping.
Science	Science (American Association for the Advancement of Science). Washington, D. C.
Science, Tokyo	Science, Tokyo
Sea Frontiers	Sea Frontiers. Magazine of the International Oceanographic Foundation. Coral Gables, Fla.
Sinensia	Sinensia. Contributions from the Metropolitan Museum of Natural History. Shanghai.
Sthwest. Nat.	Southwestern Naturalist.
Student & Intel. Observer	Student and Intellectual Observer. London.
Suisan Gakkwai Ho	Suisan Gakkwai Ho, Tokyo.
Suisan Gaku Zasshi	Suisan Gaku Zasshi, Sapporo and Hakodate.
Suisan Kenkyu-Shi	Suisan Kenkyu-Shi, Tokyo.
Svensk. Fisk-Tidskr.	Svensk Fiskeritidskrift. Stockholm.
Term-Tud. Közl.	Természettudományi Közlöny. Budapest.
Thalassia jon.	Thalassia Jonica. (Instituto Sperimentale Talassografico di Taranto.) Taranto.
Trans. Amer. Fish. Soc.	Transactions of the American Fisheries Society. St. Paul, Minn.
Trans. Dumfr. Gall. nat. Hist. Soc.	Transactions and Journal of the Proceedings of the Dumfrieshire and Galloway Natural History and Antiquarian Society. Edinburgh.
Trans. Ill. Acad. Sci.	Transactions of the Illinois State Academy of Sciences. Springfield
Trans. Kans. Acad. Sci.	Transactions of the Kansas Academy of Science. Topeka.
Trans. Ky. Acad. Sci.	Transactions of the Kentucky Academy of Science. Lexington.

Trans. Linn. Soc. Lond. (Zool.)	Transactions of the Linnean Society of London. (Zoology).
Trans. path. Soc. Lond.	Transactions of the Pathological Society of London.
Trans. Proc. N.Z. Inst.	Transactions and Proceedings of the New Zealand Institute. Wellington.
Trans. roy. Soc. Can. (V)	Transactions of the Royal Society of Canada. SectionV.-Biological Sciences. Ottawa.
Trans. Wis. Acad. Sci. Arts Lett.	Transactions of the Wisconsin Academy of Sciences, Arts and Letters. Madison, Wis.
Trans. zool. Soc. Lond.	Transactions of the Zoological Society of London.
Trav. Inst. sci. chérif	Travaux. Institut Scientifique Chérifien. Tanger.
Trav. Inst. zool. Acad. Sci. URSS	Travaux de l'Institut zoologique de l'Academie des sciences de l'URSS. Leningrad.
Trav. Lab. Soc. sci. Arcachon	Travaux des laboratoires de la Societe scientifique et Station zoologique d'Arcachon. Bordeaux.
Trav. sci. Univ. Rennes	Travaux scientifiques de l'Université de Rennes.
Trav. Soc. Nat., St-Pétersb.	Travaux de la Societe Imperial des naturalistes de St-Pétersbourg.
Turtox News	Turtox News. Chicago.
Univ. Wash. Publ. Fish.	University of Washington Publications-Fisheries. Seattle, Wash.
Verh. dtsch. zool. Ges.	Verhandlungen der Deutschen Zoologischen Gesellschaft. Leipzig.
Verh. phys.-med. Ges. Würzb.	Verhandlungen der Physikalisch-medizinischen Gesellschaft zu Würzburg.
Verh. schweiz. naturf. Ges.	Verhandlungen der Schweizerischen Naturforschenden Gesellschaft. Aarau.
Verh. zool.-bot. Ges. Wien	Verhandlungen der Zoologisch-botanischen Gesellschaft. Wien.

Versl. gewone Vergad. Akad. Amst.	Verslagen van de gewone vergadering der Wis-en natuurkundige afdeeling. Konink Akademie van wetenschappen te Amsterdam.
Věstn. čsl. Spol. zool.	Věstnik Československé Společnosti Zoologické. Prague.
Vict. Nat.	Victorian Naturalist. Melbourne.
Vidensk. Medd. dansk naturh. Foren. Kbh.	Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i København.
Virchows Arch.	Virchows Archiv für pathologische Anatomie und physiologie für klinische Medizin. Berlin.
Vop. Ikhtiol.	Voprosy Ikhtiologii. Moscow.
Wiss. Meeresuntersuch.	Wissenschaftliche Meeresuntersuchungen der Kommission zur Wissenschaftlichen Untersuchung der Deutschen Meere. Kiel and Leipzig.
Wiss. Z. Martin-Luther-Univ. math.-nat.	Wissenschaftliche Zeitschrift der Martin-Luther-Universitat Halle - Wittenberg. Mathematisch-Naturwissenschaftliche Reihe. Halle.
Wschr. Aquar.-u. Terrarienk.	Wochenschrift für Aquarien-und Terrarienkunde. Braunschweig.
Yoshoku-Kaishi	Yoshoku-Kaishi, Tokyo.
Z. Fisch.	Zeitschrift für Fischerei und deren Hilfswissenschaften. Berlin.
Z. Morph. Ökol. Tiere	Zeitschrift für Morphologie und Ökologie der Tiere. Berlin.
Z. Naturf. (B)	Zeitschrift für Naturforschung. Tiel B.-Chemie, Biochemie, Biophysik, Biologie und Verwandte Gebiete. Wiesbaden.
Z. Tierpsychol.	Zeitschrift für Tierpsychologie. Berlin.
Z. wiss. Zool.	Zeitschrift für Wissenschaftliche Zoologie. Leipzig.
Zool. Anz.	Zoologischer Anzeiger. Leipzig.
Zool. Gart., Frankfurt	Zoologische Garten. Frankfurt.
Zool. Gart., Lpz.	Zoologische Garten. Leipzig.

Zool. Jb. Anat.	Zoologische Jarhbücher. Abteilung für Anatomie und Ontogenie der Tiere. Jena.
Zool. Mag., Tokyo	Zoological Magazine. Tokyo.
Zoologica, N.Y.	Zoologica. Scientific Contributions of the New York Zoological Society.
Zoologist	Zoologist. London.